DURATION CURVES AND LOW-FLOW FREQUENCY CURVES OF STREAMFLOW IN THE SUSQUEHANNA RIVER BASIN, NEW YORK

By
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Cover photo-
Wharton Creek at New Berlin, N. Y.

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DURATION CURVES AND LOW-FLOW FREQUENCY CURVES OF STREAMFLOW IN THE SUSQUEHANNA RIVER BASIN, NEW YORK

By

OLIVER P. HUNT

INTRODUCTION

Large supplies of surface water are available in the Susquehanna River basin in New York. In recent years some areas in the basin have experienced deficiencies during periods of low streamflow because of increased use, while in other areas the water has become unusable for some purposes because of pollution. To overcome these deficiencies and to help abate pollution, plans must be made for the development and use of the excess water available during period of high flows.

The purpose of this report is to make available, to those concerned with water-resources planning, the results of analyses of surface-water data collected at the 127 sites in the upper reaches of the Susquehanna River basin in New York shown in figure 1. Station types and periods of record are listed in table 1 beginning on page 14.

The term, "upper Susquehanna," is often applied to that part of the basin upstream from the mouth of the West Branch Susquehanna River. This report, however, is concerned with only that portion of the upper basin drained by the Susquehanna and Chemung Rivers at the point of their confluence (just south of Athens, Pennsylvania). The drainage area at this point is 7,560 square miles of which 2,600 square miles constitute the drainage area of the Chemung River. About 83 percent of the total area lies in New York State and the remainder in Pennsylvania. Low-flow frequency and flow-duration data for several streams in the Pennsylvania portion of this upper basin are included in a report by Busch and Shaw (1966). A comprehensive report describing the total water resources of the basin will be published at a later date.

Data are presented for specific sites showing duration of daily discharge, low flows for selected periods of consecutive days, as well as magnitude and frequency of low flows. Information on low flows is a prerequisite to orderly development and utilization of surface water in the basin. Low-flow frequency data may be used to study the economics of a storage reservoir for low-flow augmentation, recreational use, or water supply.

This report was prepared in the district office of the U.S. Geological Survey in Albany, N. Y., under the direction of D. F. Dougherty, District Engineer, Surface Water Branch, succeeded by R. C. Heath, District Chief.

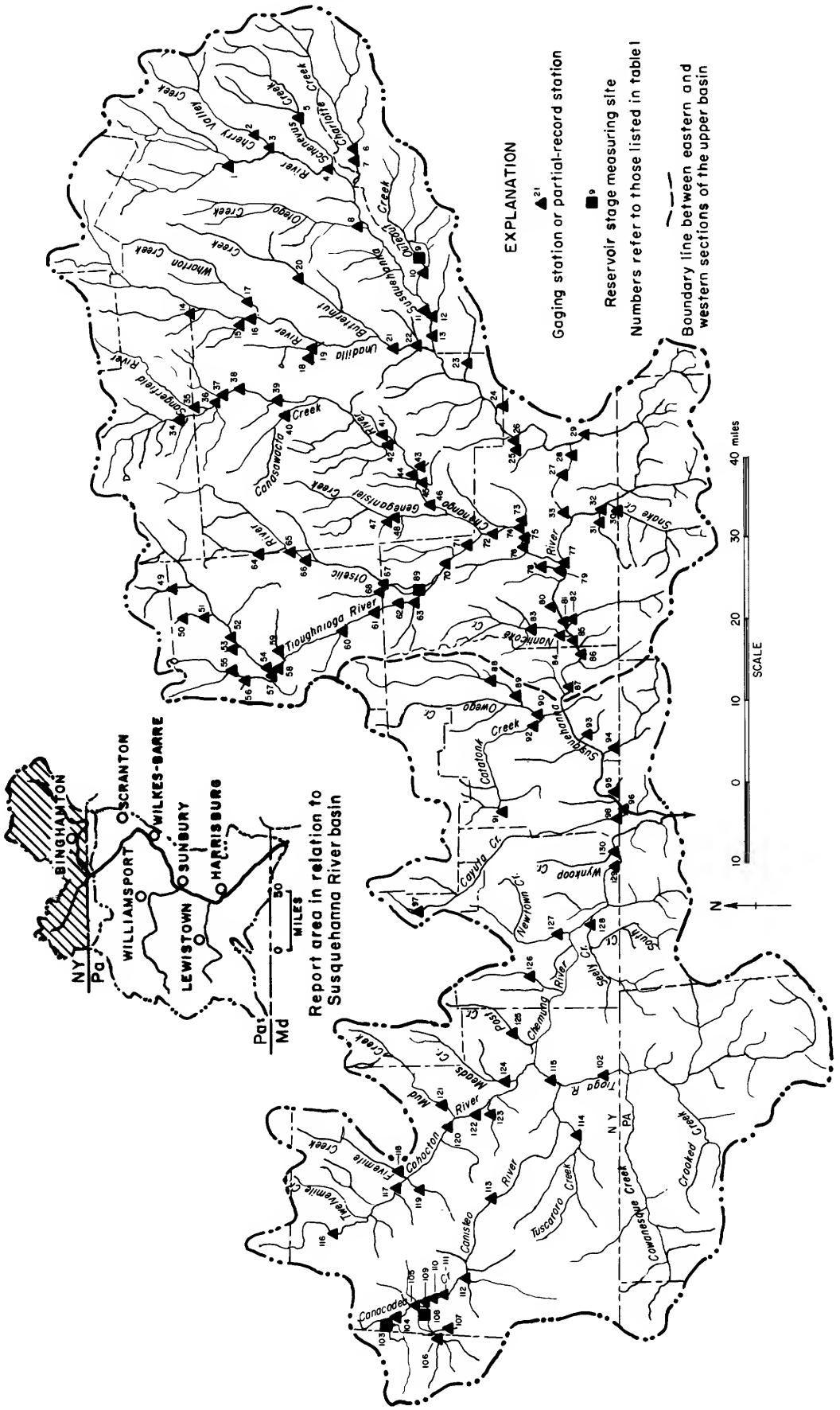


Figure 1. Surface-water measuring sites in the Susquehanna River basin in New York.

This is one of several reports to be prepared by the Geological Survey, United States Department of the Interior, in cooperation with the Water Resources Commission, New York State Conservation Department, to make basic streamflow data available to interested persons.

Streamflow records used in this report have been collected by the U.S. Geological Survey under cooperative agreements with the New York State Departments of Conservation, Health, and Public Works. Assistance was also furnished by the Corps of Engineers, U.S. Army, and by the U.S. Weather Bureau, Department of Commerce.

METHOD OF STUDY

The discharge data for 46 gaging stations in the report area have been analysed by electronic computer. Included are all gaging stations, active or discontinued, having records for 4 or more complete years through the 1960 water year. These data have been analysed as follows:

Duration of daily discharge data - Number of days during each water year (October 1 to the following September 30) that flows were in given ranges of discharge.

Annual low-flow summary data - Minimum average consecutive-day discharge for selected numbers of days in each climatic year (April 1 to the following March 31).

Although not included in this report, the annual high-flow summary data (maximum average consecutive-day discharge for various number of days in each water year) are available in the files of U.S. Geological Survey in Albany, N. Y.

Using the analysed data, duration curves of daily discharge and low-flow frequency curves were developed by graphical methods. The procedure consists of drawing a smooth curve based on the plotted points.

FLOW-DURATION ANALYSIS

The flow-duration curve has been recognized for many years as a useful device for analysing the availability and variability of streamflow. The flow-duration curve, when based on many years of record, is useful as an indicator of the probable future behavior of the stream. Duration curves are particularly useful for preliminary and general studies but should be supplemented by detailed site data for specific impoundment investigations.

The shape of the duration curve is an index of natural storage within a basin, including ground-water storage. The more nearly horizontal the curve, the greater is the storage.

During dry weather, the flow of streams is almost entirely from ground-water sources. The lower end of duration curves, therefore, indicates in a general way the characteristics of the shallower ground-water bodies in the drainage basin. Duration curves, thus, are useful guides in locating possible sources of ground water.

GAGING STATIONS

One of the primary uses of a duration curve is in making comparisons of flow characteristics of a stream with those of other streams. In order to make this comparison, all duration curves must be adjusted to a common period.

Stations listed below, whose records started at the beginning of the 1931 water year or earlier, are classified as base stations and have been used to adjust shorter continuous record flow-duration curves to "1931-60 standard period" curves (Searcy, 1959).

Base stations in the Susquehanna River basin, New York

Station number	Map number	Gaging station
4975.	4	Susquehanna River at Colliersville
5010.	16	Unadilla River at New Berlin
5030.	32	Susquehanna River at Conklin
5115.	70	Tioughnioga River at Itaska
5125.	72	Chenango River near Chenango Forks
5140.	90	Owego Creek near Owego
5205.	102	Tioga River at Lindley
5265.	115	Tioga River near Erwins
5295.	122	Cohocton River near Campbell
5310.	129	Chemung River at Chemung

For comparative purposes, duration curves of daily discharge for the 1931-60 standard period for the 10 base stations listed above are shown in figures 2 and 3. These curves are plotted on logarithmic-probability paper on a ratio basis where the mean annual discharge equals 1.0. This eliminates the effect of the difference in size of drainage areas and also keeps the spread of the curves at a minimum. The curves shown in figure 2, "eastern section, upper Susquehanna River basin stations," are for gaging stations upstream from and excluding the Owego Creek sub-basin. Examination of the curves shows the following:

1. Between about 2 percent and about 80 percent there is very little spread between the curves and they are nearly parallel.

2. The general slope of the curves is about 55°.

3. The mean annual discharge is in a range that is equaled or exceeded 29 to 33 percent of the time.

The curves shown in figure 3 for the "western section, upper Susquehanna River basin stations," are for the Susquehanna River and tributaries from Owego Creek to Chemung River, including both.

The following is evident:

1. As in figure 2, between about 2 percent and about 80 percent there is very little spread between the curves and they are nearly parallel.

2. The general slope of the curves is about 60°.

3. The mean annual discharge is in a range that is equaled or exceeded 23 to 27 percent of the time.

The lower end of the duration curves in both figures 2 and 3 show, for the most part, the effect of the geology of a basin on streamflow. The duration curve for Susquehanna River at Colliersville (fig. 2) also shows the effect of regulation in storing and/or releasing water from Goodyear Lake for powerplant operation.

The average annual discharge for the 1931-60 period for gaging stations in the eastern section ranges from 1.4 csm (cubic feet per second per square mile) to 1.8 csm (19.0 to 24.4 inches of runoff per year). According to U.S. Weather Bureau (1960) data, the average annual precipitation in this area varies from about 39 to 42 inches. In the western section the average annual discharge for the 1931-60 period ranges from 0.9 csm to 1.3 csm (12.2 to 17.6 inches of runoff per year). U.S. Weather Bureau figures indicate the average annual precipitation in this area is about 31 to 36 inches.

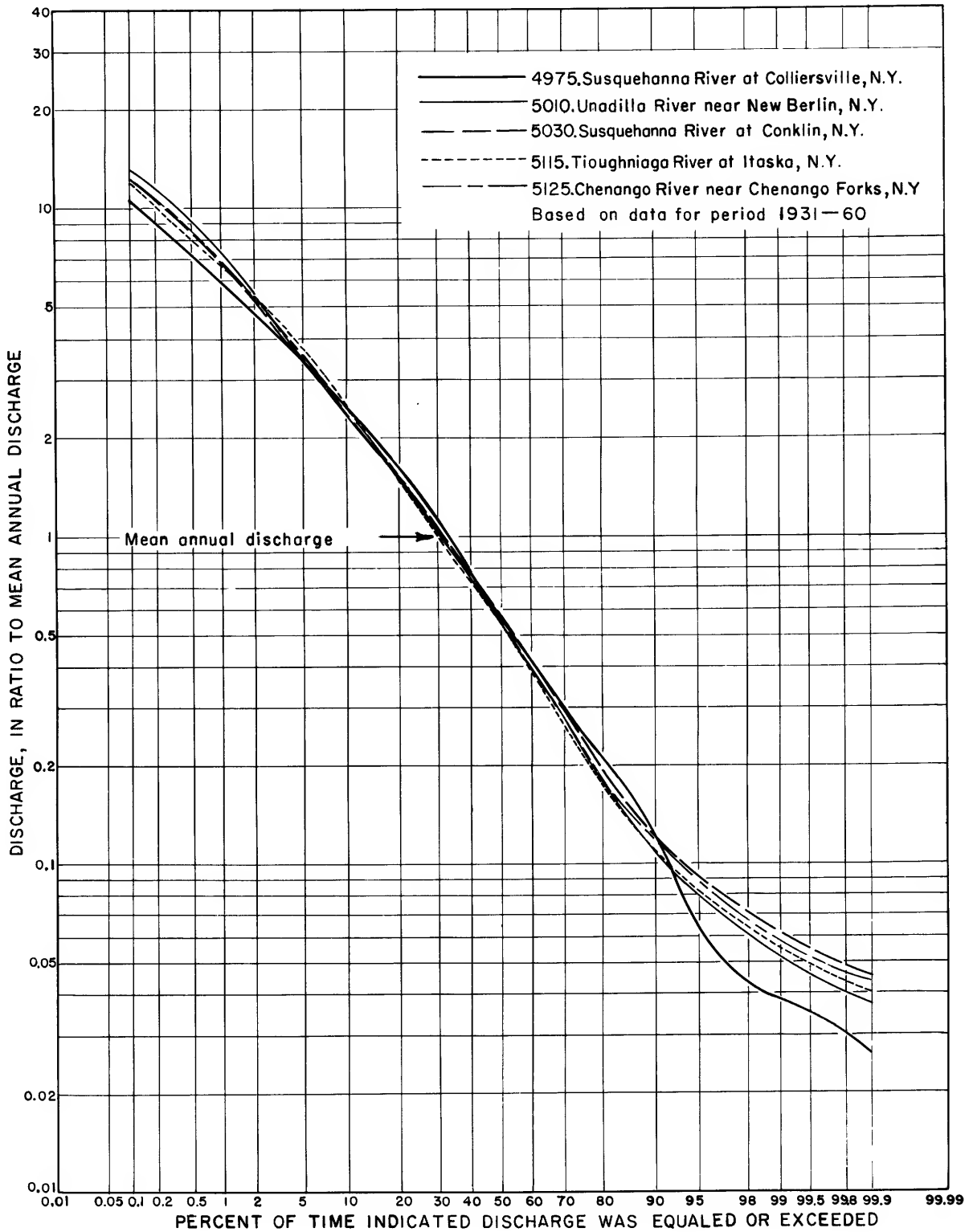


Figure 2.--Duration ratio curves of daily discharge, eastern section, upper Susquehanna River basin base stations.

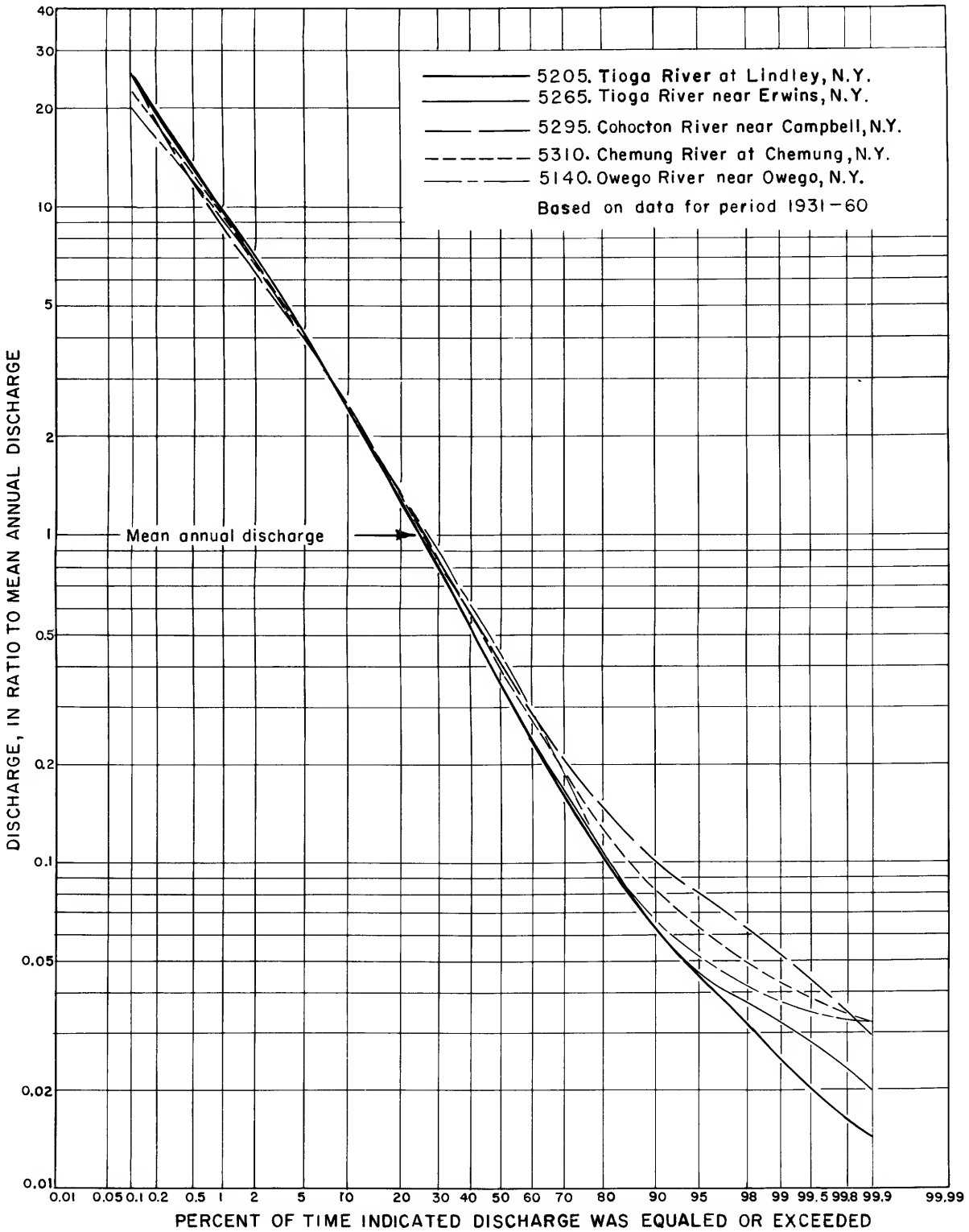


Figure 3.--Duration ratio curves of daily discharge, western section, upper Susquehanna River basin base stations.

Precipitation studies suggest that the standard period 1931-60 is typical of the past 100 years. A graphical method, described by Searcy (1959), has been used to extend shorter records to the 1931-60 standard period.

PARTIAL-RECORD STATIONS

Duration curves of daily discharge for partial-record stations were estimated by relating measured discharges at those stations to concurrent daily discharges at two or more gaging stations whose flow-duration curve had been adjusted to the standard period (Hunt, 1963).

Some partial-record stations have insufficient data to permit development of values of average discharge or duration curves of daily discharge through all or part of the 50 to 99 percent range. For these stations, dashes (-) are used in the statistical streamflow summary to indicate that the discharges are not available at this time (1966).

LOW-FLOW FREQUENCY ANALYSIS

GAGING STATIONS

An analysis by electronic computer provided low-flow summary data in terms of minimum annual consecutive-day discharges for periods ranging from 1 day to 274 days for 47 continuous-record gaging stations in the basin. Minimum average discharges for each of these consecutive periods (for the period of record through March 1960) were selected from the computer listings and are tabulated in the statistical summary section of this report.

A frequency analysis of the annual data was then made for each station, resulting in a family of curves similar to those shown in figure 4 for Susquehanna River at Conklin. Plotting positions of the discharges to define the curves in figure 4 were obtained by use of the formula:

$$\text{Recurrence interval} = \frac{N+1}{M}$$

Lines of best fit (by eye) were used to draw the curves based on the plotted points.

The most commonly used frequency relationships, 1-, 7-, and 30-day periods, are needed for studies involving fish stocking, pollution control, and water supply. For this reason, only these three relationships have been developed for all stations for inclusion in this report.

In the analysis of low-flow frequencies, the climatic year April 1 to March 31 was used because it does not divide the low-flow season as does the water year or calendar year. Curves have been developed for each continuous-record station having 10 or more years of record (through 1960), and are expressed in tabular form in the statistical summary of streamflow. Dashes (-) have been used when insufficient data were available to develop the curves for long recurrence intervals.

Continuous-record gaging stations having less than 10 years of record have been treated as partial-record stations.

PARTIAL-RECORD STATIONS

Frequency data for partial-record stations were obtained by correlation methods (Riggs, 1965). As in developing duration curves of daily discharge, at least two nearby continuous-record gaging stations were used to estimate the 1-day, 7-day, and 30-day discharges having recurrence intervals of 2, 5, and 10 years.

Dashes (-) have been used when insufficient data were available to develop the curves for long recurrence intervals.

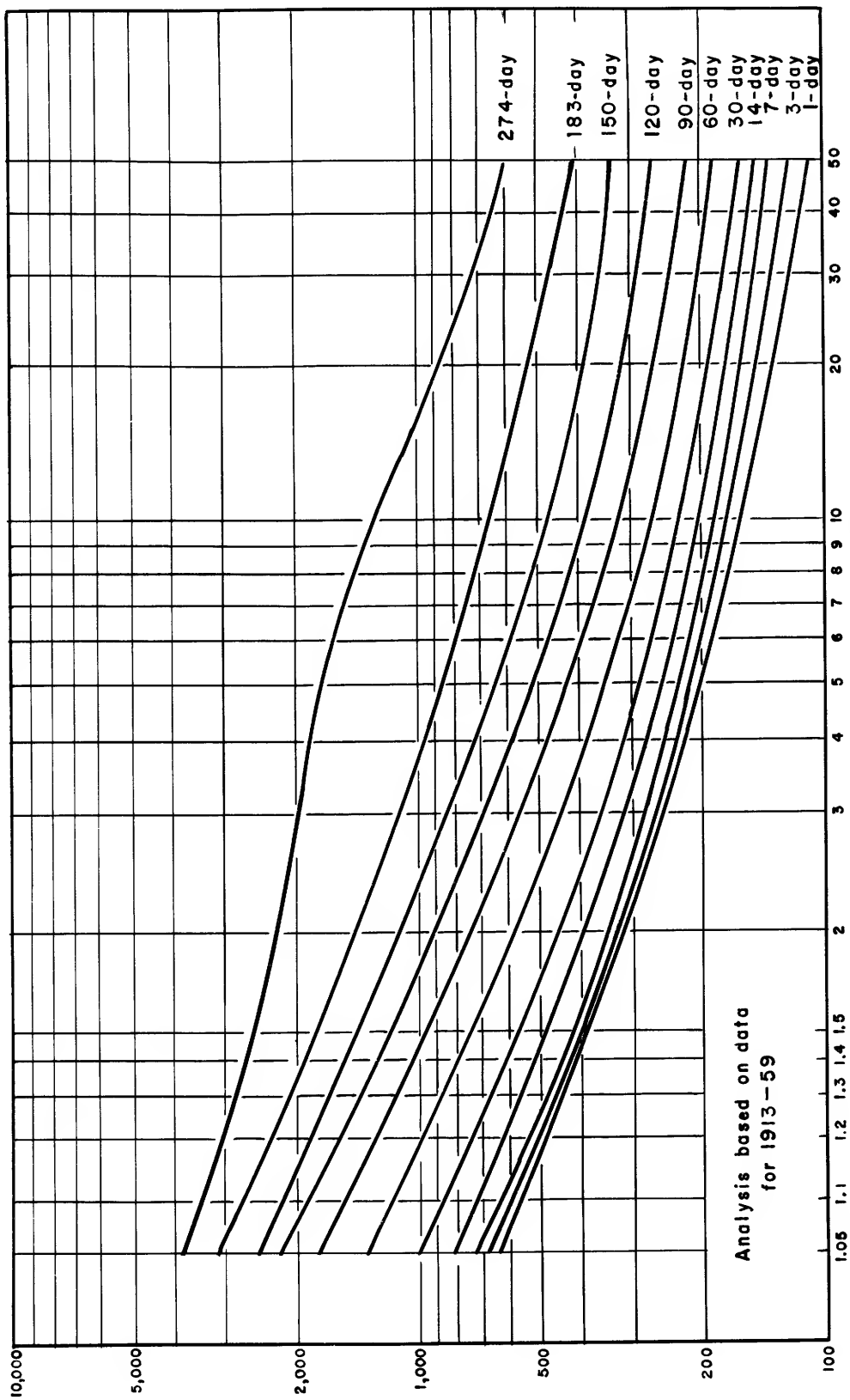


Figure 4.--Magnitude and frequency of minimum average consecutive day discharges, Susquehanna River at Conklin, N. Y.

MANMADE CHANGES

Cross (1963) states, "The pattern of water use is continually changing, and no stream in Ohio flows under 'natural' or unaffected conditions ...". This statement can also be applied to the flow of streams in the Susquehanna River basin. The changes can be divided into two general groups: (1) those that have been applied to land in converting it to man's beneficial use, such as urban development, irrigation, reforestation, changes in agricultural use (crop rotation, contour plowing, etc.), and (2) those that can be classified as changes to the stream system, such as diversions into or out of the basin and construction of dams for impounding reservoirs. The effects of some of the changes, such as the construction of "farm ponds" are difficult to evaluate. Some changes commenced long before records of streamflow were obtained in the area; for example, the diversion of water from Chenango River out of the basin through the Oriskany feeder. Other changes have taken place slowly and continue so gradually that the effects can only be isolated by a detailed hydrologic study such as that carried out in the Shackham Brook reforestation area (Schneider and Ayer, 1961).

It is beyond the scope of this report to try to describe or define the effects of the manmade changes of streamflow in the Susquehanna River basin area in detail. However, some of the major changes are noted in the "Remarks" paragraph of the statistical summary of streamflow data which starts on page 23. Note, for example, the "Remarks" for station 4965, Oaks Creek at Index. The values for stream parameters in this report thus reflect conditions as they now exist in the basin, and serve as a basis for evaluating management changes to be imposed on the hydrologic system in the future.

SUMMATION

An inventory of gaging stations used in this report is included as table 1, showing station types and periods of record. Also listed, for historical interest, are sites where streamflow data have been collected in the past but where records were discredited, fragmentary, not previously published, and hence, have not been used in this report.

For comparative purposes, table 2 lists certain discharge data for all stations in the eastern section, upper Susquehanna River basin having 10 or more years of record. The duration data listed are from the 1931-60 standard period curves while the minimum 7-day and the minimum daily discharges are for the actual period of record (through 1960) for each gaging station.

The following conclusions, useful for preliminary studies only, can be drawn from table 2:

1. Daily discharges at the 30-percent duration point, near the mean annual discharge, show a unit runoff from 1.43 to 1.84 cfs per square mile; the average for 23 stations is 1.65 cfs per square mile.

2. At the "index of low-flow" (Babbitt and Doland, 1955), (the 90-percent duration of daily discharge), the unit runoff can be expected to be about 0.15 to 0.2 cfs per square mile from streams draining areas of 100 square miles or more.

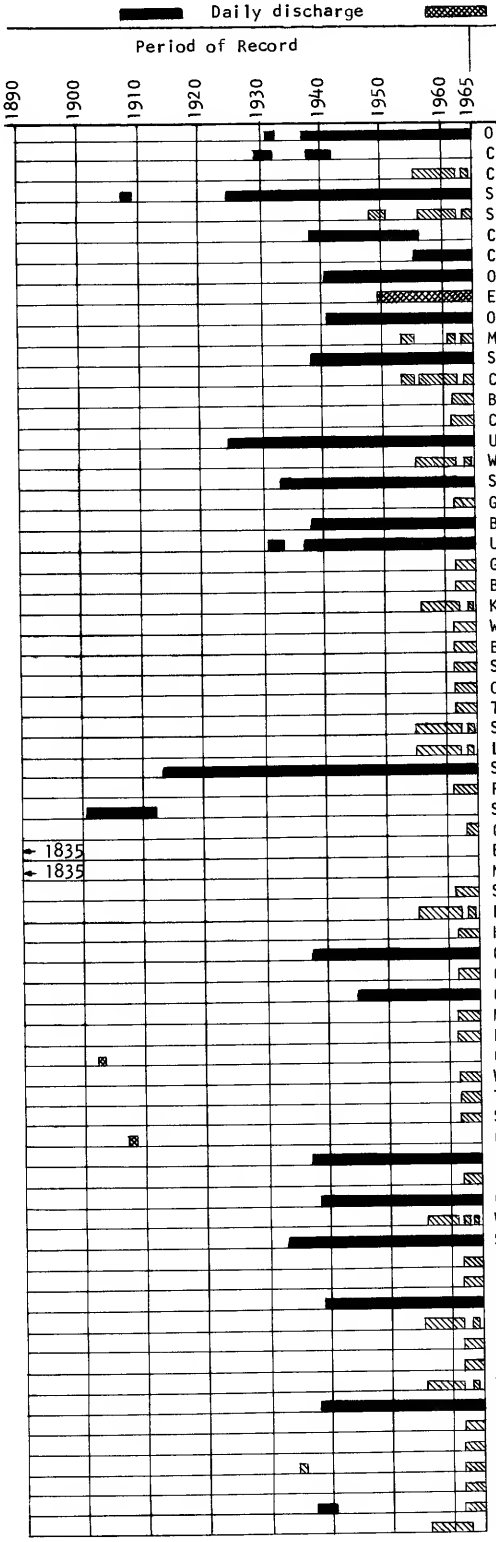
3. The minimum average consecutive 7-day discharge with 10-year recurrence interval for streams with drainage areas greater than 100 square miles can be expected to be in the 0.05 to 0.1 cfs per square mile range.

Similarly, table 3 lists discharge data for stations in the western section, upper Susquehanna River basin having 10 or more complete years of record. Examination of this table indicates:

1. The unit runoff for Owego Creek near Owego reflects a transition between the eastern and western sections. The high unit runoff for Susquehanna River near Waverly is the result of 85± percent (about 4,000 square miles) of the discharge originating in the eastern section. Mud Creek near Savona shows the effect of manmade diversion and regulation.

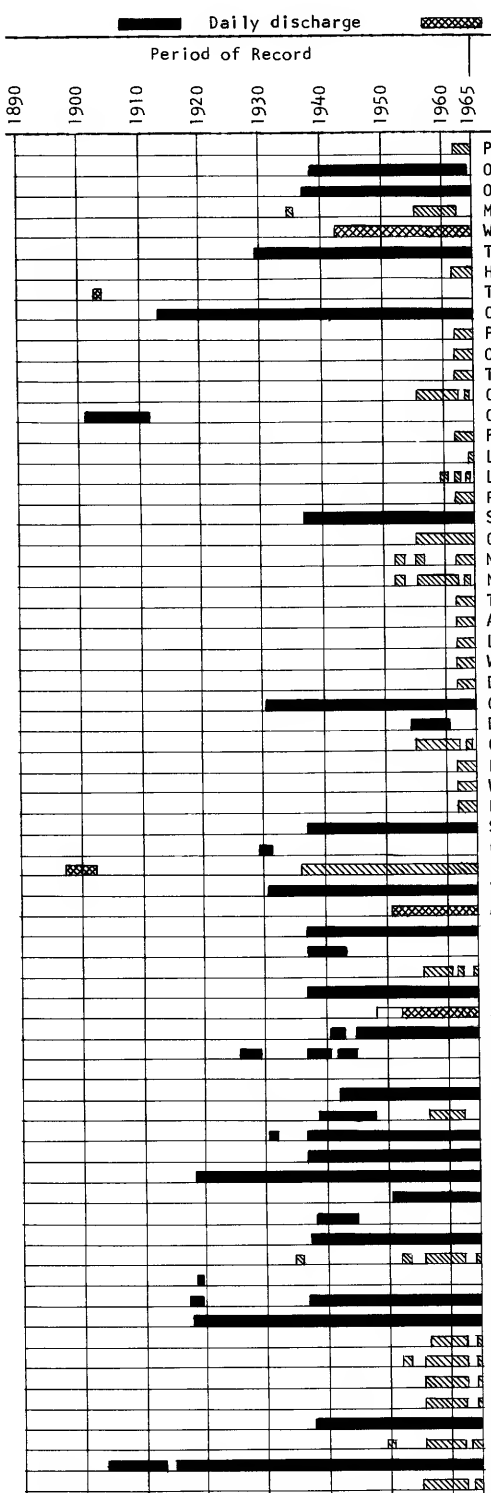
Table 1.--Inventory of surface-water measuring sites in the Susquehanna River basin in New York

This bar chart provides a means of comparing length and type of record at data collection sites. Stations are listed in downstream order (see p.19). The map number is used to identify the site in figure 1. The page number is an index to location of analytical data.



Station name and location	Station no.	Map no.	Page no.
Oaks Creek at Index	4965.	1	23
Cherry Valley Creek at Westville	4970.	2	23
Cherry Valley Creek at Milford	4972.	3	23
Susquehanna River at Colliersville	4975.	4	23
Schenevus Creek at Schenevus	4978.	5	24
Charlotte Creek at Davenport Center a/	4980.	6	
Charlotte Creek at West Davenport	4985.	7	24
Otego Creek near Oneonta	4990.	8	24
East Sidney Reservoir at East Sidney	4995.	9	
Ouleout Creek at East Sidney	5000.	10	24
Martin Brook near Unadilla	5004.95	11	25
Susquehanna River at Unadilla	5005.	12	25
Carrs Creek at Unadilla	5008.	13	25
Beaver Creek near South Edmeston	5009.8	14	25
Center Brook at New Berlin	5009.9	15	25
Unadilla River near New Berlin	5010.	16	26
Wharton Creek at New Berlin	5012.	17	26
Sage Brook near South New Berlin	5015.	18	26
Great Brook at Holmesville	5015.1	19	26
Butternut Creek at Morris	5020.	20	27
Unadilla River at Rockdale	5025.	21	27
Guilford Creek at East Guilford	5025.5	22	27
Big Brook near Bennettsville	5026.8	23	27
Kelsey Creek at Afton	5027.	24	27
Wylie Brook at Harpursville	5027.1	25	28
Belden Brook at Harpursville	5027.12	26	28
Sage Creek at Ouaquaga	5027.2	27	28
Occanum Creek at Windsor	5027.3	28	28
Tuscarora Creek at Damascus	5027.4	29	28
Snake Creek at Corbettsville	5028.	30	29
Little Snake Creek at Conklin	5029.	31	29
Susquehanna River at Conklin	5030.	32	29
Park Creek near Binghamton	5033.	33	29
Susquehanna River at Binghamton c/	5035	b/	
Chenango River at Eaton	5039.8	34	29
Eaton Brook, Madison County d/	5040.	b/	
Madison Brook, Madison County d/	5045.	b/	
Sangerfield River near Earlville	5047.8	35	30
Pleasant Brook near Sherburne	5048.	36	30
Handsome Brook at Sherburne	5049.	37	30
Chenango River at Sherburne	5050.	38	30
Cold Brook near North Norwich	5050.2	39	30
Canasawacta Creek near South Plymouth	5055.	40	31
Mill Brook near Oxford	5059.2	41	31
Bowman Creek near Tyner	5059.5	42	31
Chenango River at South Oxford e/	5060.	b/	
Wheeler Brook near Brisben	5063.	43	31
Tillotson Creek near Brisben	5063.5	44	31
Spring Brook near Brisben	5064.	45	32
Chenango River near Greene e/	5065.	b/	
Chenango River at Greene	5070.	46	32
Pond Brook at Smithville Flats	5074.9	47	32
Genegantslet Creek at Smithville Flats	5075.	48	32
West Branch Tioughnioga Creek near Cuyler	5079.5	49	32
Shackham Brook near Truxton	5080.	50	33
Labrador Creek at Truxton	5082.	51	33
Cheningo Creek near Truxton	5084.	52	33
Albright Creek at East Homer	5085.	53	33
East Branch Tioughnioga River near Cortland	5085.5	54	34
Cold Brook at Little York	5087.	55	34
Factory Brook at Homer	5088.	56	34
West Branch Tioughnioga River at Cortland	5089.8	57	34
Tioughnioga River at Cortland	5090.	58	34
Trout Brook near Blodgett Mills	5090.2	59	35
Gridley Creek at Messengerville	5092.	60	35
Hunts Creek at Marathon	5093.	61	35
Jennings Creek at Killawog	5094.	62	35
Dudley Creek at Lisle	5095.	63	35
Mud Creek at Union Valley	5098.	64	36

Table 1.--Inventory of surface-water measuring sites in the Susquehanna River basin in New York (Continued)



Station name and location	Station no.	Map no.	Page no.
Pond Creek at Taylor	5099.	65	36
Otselic River at Cincinnatus	5100.	66	36
Otselic River near Upper Lisle	5105.	67	36
Merrill Creek at Upper Lisle	5107.	68	36
Whitney Point Reservoir at Whitney Point	5110.	69	
Tioughnioga River at Itaska	5115.	70	37
Halfway Brook near Itaska	5116.	71	37
Tioughnioga River at Chenango Forks e/	5120.	b/	
Chenango River near Chenango Forks	5125.	72	37
Page Brook near Port Crane	5125.5	73	37
Osborne Creek at Port Crane	5126.5	74	38
Thomas Creek at Chenango Bridge	5127.8	75	38
Castle Creek at Hinmans Corners	5128.	76	38
Chenango River at Binghamton c/	5130.	b/	
Fuller Hollow Creek at Johnson City	5131.	77	38
Little Choconut Creek at Stella	5131.9	78	38
Little Choconut Creek at Johnson City	5132.	79	39
Patterson Creek at Endwell	5134.	80	39
Susquehanna River at Vestal	5135.	81	39
Choconut Creek at Vestal	5137.	82	39
Nanticoke Creek at Union Center	5137.9	83	39
Nanticoke Creek at Endicott	5138.	84	40
Tracy Creek near Vestal	5138.1	85	40
Apalachin Creek at Apalachin	5138.2	86	40
Little Nanticoke Creek near Owego	5138.3	87	40
Wilson Creek near Newark Valley	5139.1	88	40
Doolittle Creek at Weltonville	5139.9	89	41
Owego Creek near Owego	5140.	90	41
Dean Creek at Spencer	5145.	91	41
Catatonk Creek near Owego	5148.	92	41
Pipe Creek at Tioga Center	5148.8	93	42
Wappasening Creek at Nichols	5149.	94	42
Ellis Creek near Barton	5149.5	95	42
Susquehanna River near Waverly	5150.	96	42
Cayuta Creek near Alpine	5155.	97	42
Cayuta Creek at Waverly f/	5160.	98	43
Tioga River at Lindley	5205.	102	43
Arkport Reservoir near Arkport	5210.	103	
Canisteo River at Arkport	5215.	104	43
Canisteo River at Hornell	5220.	105	43
Canacadea Creek near Almond	5223.	106	43
Karr Valley Creek at Almond	5225.	107	44
Almond Reservoir near Almond g/	5230.	108	
Canacadea Creek near Hornell	5235.	109	44
Canacadea Creek at Hornell h/	5240.	110	
Canisteo River below Canacadea Creek, at Hornell	5245.	111	44
Bennett Creek at Canisteo	5250.	112	45
Canisteo River at West Cameron	5255.	113	45
Tuscarora Creek near South Addison	5260.	114	45
Tioga River near Erwins	5265.	115	45
Cohocton River at Cohocton	5270.	116	46
Cohocton River at Avoca	5275.	117	46
Fivemile Creek near Kanona	5280.	118	46
Campbell Creek near Kanona	5282.	119	46
Cohocton River near Savona i/	5285.	120	
Mud Creek near Savona	5290.	121	47
Cohocton River near Campbell	5295.	122	47
Michigan Creek at Campbell	5295.5	123	47
Meads Creek at Coopers Plains	5298.	124	47
Post Creek at Corning	5302.	125	48
Singsing Creek near Elmira	5303.	126	48
Newtown Creek at Elmira	5305.	127	48
Seeley Creek near Elmira	5308.	128	48
Chemung River at Chemung	5310.	129	49
Wynkoop Creek at Chemung	5312.	130	49

a/ Combined with station 4985.
b/ Not shown on map.
c/ Records discredited.
d/ Fragmentary records; not used.
e/ Not published.
f/ Intermittent gage heights and discharge measurements 1898-1902 not used.
g/ Monthly stage and contents only prior to October 1952.
h/ Records equivalent to station 5235.
i/ Nine months record; not used.

Table 2.--Summary of streamflow - eastern section, upper Susquehanna River basin, New York

Station no.	Station name	Drainage area (square miles)	Discharge, in cfs per square mile					
			Duration of daily discharge (based on standard period 1931-60)				Minimum average consecutive 7-day discharge with a 10-year recurrence interval [a]	Minimum daily discharge [a]
			10%	30%	50%	90%		
4965.	Oaks Creek at Index	103	4.03	1.84	0.97	0.17	0.05	0.04
4975.	Susquehanna River at Colliersville	351	3.99	1.77	.91	.20	.05	.02 [b]
4985.	Charlotte Creek at West Davenport	167	3.53	1.53	.78	.14	.04	.03
4990.	Otego Creek near Oneonta	108	3.61	1.53	.82	.18	.07	.06
5000.	Ouleout Creek at East Sidney [c]	102	4.02	1.67	.89	.17	.04	.04 [d]
5005.	Susquehanna River at Unadilla	984	3.76	1.73	.88	.20	.09	.06
5010.	Unadilla River near New Berlin	196	3.88	1.68	.92	.18	.07	.04
5015.	Sage Brook near South New Berlin	.70	3.71	1.43	.70	.04	Trace	Trace
5020.	Butternut Creek at Morris	59.6	3.61	1.58	.82	.17	.07	.02
5025.	Unadilla River at Rockdale	518	3.86	1.72	.87	.20	.08	.06
5030.	Susquehanna River at Conklin	2,240	3.84	1.65	.89	.19	.08	.05
5050.	Chenango River at Sherburne	264	3.56	1.59	.87	.19	.08	.07
5055.	Canaswacta Creek near South Plymouth	58.3	4.12	1.72	.87	.09	.01	.01
5070.	Chenango River near Greene	598	3.68	1.61	.89	.18	.08	.06
5075.	Genegantslet Creek at Smithville Flats	83.1	3.79	1.44	.70	.10	.02	.01
5080.	Shackham Brook near Truxton	3.12	4.49	1.79	.83	.06	.02	.01
5085.	Albright Creek at East Homer	7.08	3.95	1.69	.85	.09	.01	Trace
5090.	Tioughnioga River at Cortland	296	3.72	1.66	.90	.21	.09	.06
5100.	Otselic River at Cincinnatus	148	4.05	1.69	.91	.16	.06	.03
5105.	Otselic River near Upper Lisle	216	4.03	1.71	.93	.16	.06	.03
5115.	Tioughnioga River at Itaska	735	4.22	1.70	.91	.19	.08	.05
5125.	Chenango River near Chenango Forks	1,492	3.89	1.61	.84	.19	.09	.06
5135.	Susquehanna River at Vestal	3,960	3.79	1.67	.88	.20	.08	.06

[a] Period of record through March 1960.

[b] Trace during period of unusual regulation.

[c] Based on pattern of regulation during 1950-60.

[d] 0.01 during period of unusual regulation.

2. Daily discharges at the 30-percent duration point show a unit runoff between 0.53 and 1.29 cfs per square mile excluding the stations near Waverly and Savona. For 15 stations, this averages 0.85 cfs per square mile or about half the unit runoff found at stations in the eastern section.

3. For streams with drainage areas of 100 square miles or more, the expected runoff at the 90-percent duration point will be about 0.05 to 0.1 cfs per square mile.

4. Most gaging-station records in the western section indicate that the minimum average consecutive 7-day discharge for a 10-year recurrence interval will be 0.05 cfs per square mile or less.

5. Cohocton River at Cohocton shows a high unit runoff, 1.11 cfs per square mile, at the 30-percent duration point. It is believed that the natural storage in the large (6 to 7 square miles) swampy area, just upstream from the station, probably reduces the high daily discharges and, thus, increases the daily discharges in the 30-percent duration range.

These generalizations provide a useful basis for preliminary studies necessary in the design of surface-water developments. It should be recognized that they are based on data collected at specific sites and that wide variations in streamflow occur within a gaged basin. At the present time, no dependable method has been developed for extending low-flow data from gaged streams to ungaged streams. Thus, for detailed design, the low-flow characteristics of a stream at a specific site should be established by actual low base-flow measurements and not on a drainage-area basis.

Table 3.--Summary of streamflow - western section, upper Susquehanna River basin, New York

Station no.	Station name	Drainage area (square miles)	Discharge, in cfs per square mile					
			Duration of daily discharge (based on standard period 1931-60)				Minimum average consecutive 7-day discharge with a 10-year recurrence interval [a]	Minimum daily discharge [a]
			10%	30%	50%	90%		
5140.	Owego Creek near Owego	186	3.49	1.29	0.62	0.10	0.06	0.05
5150.	Susquehanna River near Waverly	4,780	3.77	1.61	.86	.18	.08	.06
5180.	Tioga River at Tioga, Pa.	282	2.98	.99	.44	.09	.03	.02
5205.	Tioga River at Lindley	770	2.66	.87	.38	.06	.02	.01
5215.	Canisteo River at Arkport	30.5	2.62	.79	.30	.05	.02	.01
5225.	Karr Valley Creek at Almond	27.6	2.68	.69	.26	.03	.01	0
5235.	Canacadea Creek near Hornell	58.7	2.39	.75	.37	.13	.08	.07
5245.	Canisteo River below Canacadea Creek, at Hornell	159	2.26	.79	.42	.13	.08	.06
5255.	Canisteo River at West Cameron	342	2.46	.72	.34	.10	.05	.04
5260.	Tuscarora Creek near South Addison	114	2.11	.53	.18	.01	0	0
5265.	Tioga River near Erwins	1,370	2.48	.80	.36	.07	.02	.01
5270.	Cohocton River at Cohocton	53.3	2.44	1.11	.56	.14	.06	.05
5280.	Fivemile Creek near Kanona	68.0	2.65	.84	.32	.03	.01	Trace
5290.	Mud Creek near Savona [b]	76.1	1.29	.32	.13	.03	.01	Trace
5295.	Cohocton River near Campbell	472	2.33	.83	.38	.10	.05	.02
5305.	Newtown Creek at Elmira	79.8	2.32	.91	.48	.16	.10	.08
5310.	Chemung River at Chemung	2,530	2.41	.83	.39	.08	.04	.02

[a] Period of record through March 1960.

[b] Unit discharge affected by regulation and substantial diversion.

DEFINITION OF TERMS

Downstream order and station number. Stations are listed in the same downstream order used in annual water-supply papers. Records are listed in a downstream direction along the main stem with all stations on a tributary entering above a main-stem station listed before that station. If a tributary enters between two main-stem stations, it is listed between them.

As an added means of identification, each gaging station and partial-record station has been assigned a station number. The numbers have been assigned in the same downstream order used in the annual series of water-supply papers. In assigning station numbers, no distinction is made between partial-record stations and continuous-record gaging stations, so that the station number for a partial-record station indicates downstream order position in a list made up of both types of stations. Gaps are left in the numbers to allow for new stations that may be established; hence, the numbers are not consecutive.

Eastern section, upper Susquehanna River basin, in this report, is that northeastern part of the basin upstream from and not including the Owego Creek sub-basin.

Western section, upper Susquehanna River basin, in this report, is that northwestern part of the basin from Owego Creek downstream to the mouth of Chemung River, including the Chemung River sub-basin.

Gaging station. A particular site on a stream, canal, lake or reservoir where systematic observations of gage height or discharge are obtained.

Partial-record station. A site where limited streamflow data, usually consisting of streamflow measurements, are collected over a period of years for use in hydrologic analysis.

Water year is the year beginning October 1 and ending September 30. The water year is designated by the calendar year in which it ends.

Climatic year is the year beginning April 1 and ending March 31. The climatic year is designated by the calendar year in which it starts.

Flow-duration curve is a cumulative frequency curve that shows the percentage of time that specified discharges are equaled or exceeded.

Low-flow frequency curve is a graph showing the recurrence interval (average return period), in years, at which the lowest mean discharge for a selected number of days during a climatic year may be expected to be no greater than a specified discharge.

Cubic foot per second (cfs) is the rate of discharge equivalent to that of a stream whose channel is 1 square foot in cross-sectional area and whose average velocity is 1 foot per second.

Drainage area of a stream at a specified location is that area, measured in a horizontal plane, which is so enclosed by a topographic divide that direct surface runoff from precipitation normally would drain by gravity into the stream above the specified point.

Standard period. To conform with the practice agreed upon by the World Meteorological Organization, this report uses the 30-year period, water years 1931-60, as the standard period (Searcy, 1959, p. 4).

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STATISTICAL SUMMARY OF STREAMFLOW

The results of analysis of the records of continuous-record gaging stations and the results of correlation studies for partial-record stations are given in the tables following. The station data are presented in the same downstream order as that used in table 1.

Gaging stations. Unless otherwise noted, the figures of average discharge and those in the top line in the duration tables are based on all the complete water years of record through September 1960. The bottom line of figures in the duration tables are for the 1931-60 standard period (see p. 5). The figures of minimum daily discharge, minimum average discharge for selected periods, and low-flow frequency were based on all the climatic years of record through 1960 (the last being indicated as the 1959 climatic year).

All gaging stations having less than 10 years of record were treated as partial-record stations.

Partial-record stations. All data for partial-record stations and short-term gaging stations (less than 10 years of record) have been obtained by correlation methods with long-term gaging stations for the 1931-60 standard period.

4965. Oaks Creek at Index, N. Y. Map No. 1

LOCATION.--Lat 42°40'00", long 74° 57'35", on right bank 200 ft upstream from highway bridge at Index, Otsego County, 0.5 mile upstream from mouth, and 3 miles southwest of Cooperstown.
DRAINAGE AREA.--103 sq mi.
AVERAGE DISCHARGE.--25 years, 173 cfs. MINIMUM DAILY DISCHARGE.--4.1 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1931, 1938-59 RECORDS

Period	Discharge	Period	Discharge
3-day	4.4	90-day	7.2
7-day	4.8	120-day	8.5
14-day	5.8	150-day	11.0
30-day	6.4	183-day	13.8
60-day	6.6	274-day	29.1

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1931, 1938-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	12	6.2	4.7	4.0	3.8
7	13	6.8	5.3	4.7	4.4
30	17	9.2	7.3	6.2	5.8

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1931-32, 1938-60	1,000	550	415	335	275	195	145	105	77	53	33	25	18	12	8.0	6.5	5.7	4.9
1931-60	1,000	570	415	325	265	190	140	100	73	51	32	24	18	12	8.0	6.6	5.8	4.9

Remarks.--Flow regulated by natural storage in Canadarago Lake.
Low-flow data listed above should not be used subsequent to the summer of 1964 because of the construction of a dam at Canadarago Lake outlet to maintain lake level for recreational uses. As a result, the following mean monthly flows were recorded in 1964: July: 5.43 cfs; August: 2.92 cfs; September: 1.71 cfs.

4970. Cherry Valley Creek at Westville, N. Y. Map No. 2

LOCATION.--Lat 42°38'00", long 74°52'55", on left bank 40 ft downstream from highway bridge at Westville, Otsego County, and 4 miles upstream from mouth.
DRAINAGE AREA.--81.3 sq mi.
RECORDS AVAILABLE.--February 1930 to June 1931, July 1938 to June 1941.
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	6	3.5	2.5
7	7	4	3
30	10	5	4

Average discharge.--130 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
60	43	30	20	16	11	6.7	4.5	3.6

Remarks.--No known regulation or diversion.
Because of the short period of record, duration and frequency curves were developed on basis of correlation studies using monthly mean discharges during open-water periods.

4972. Cherry Valley Creek at Milford, N. Y. Map No. 3

LOCATION.--Lat 42°35'34", long 74°55'42", at bridge off State Highway 166, 0.6 mile east of Milford, Otsego County.
DRAINAGE AREA.--90.4 sq mi.
RECORDS AVAILABLE.--14 discharge measurements (1956-62, 1964).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	6.5	4	3
7	7	4.5	3.5
30	9	6	5

Average discharge.--140cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
47	32	22	14	12	9.5	7.0	5.5	4.5

Remarks.--No known regulation or diversion.

4975. Susquehanna River at Colliersville, N. Y. Map No. 4

LOCATION.--Lat 42°29'55", long 74°58'55", on right bank a quarter of a mile downstream from powerplant of New York State Electric & Gas Corp. and half a mile north of Colliersville, Otsego County.
DRAINAGE AREA.--351 sq mi.
AVERAGE DISCHARGE.--36 years, 577 cfs. MINIMUM DAILY DISCHARGE.--1.6 cfs, * 5.3 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1925-59 RECORDS

Period	Discharge		Period	Discharge
3-day	1.7	* 8.3	90-day	26.9
7-day	1.9	* 9.1	120-day	31.5
14-day	12.1	*20.2	150-day	40.7
30-day	21.7	*28.0	183-day	43.2
60-day	25.8		274-day	71.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1925-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	25	16	13	11	10
7	46	24	18	15	14
30	71	42	32	26	23

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1925-60	3,300	1,900	1,400	1,100	920	640	460	330	245	180	125	98	71	39	25	21	18	15
1931-60	3,400	1,900	1,400	1,100	900	620	440	320	240	170	120	97	71	36	24	22	20	15

Remarks.--Flow regulated by natural storage in Otsego Lake and Canadarago Lake. Large diurnal fluctuations caused by powerplant above station. Subsequent to June 1964, additional regulation by dam at outlet of Canadarago Lake.
Records for May 1907 to December 1908 not used in analysis of duration or frequency data.
Unusual regulation Sept. 4-10, 1946; asterisk (*) indicates 2nd lowest mean discharge.

4978. Schenevus Creek at Schenevus, N. Y. Map No. 5

LOCATION.--Lat 42°32'45", long 74°50'00", at bridge on Tannery Street, Schenevus, Otsego County.

DRAINAGE AREA.--57.8 sq mi.
RECORDS AVAILABLE.--20 discharge measurements (1949-50, 1956-62, 1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	5.2	3.5	2.8
7	5.8	3.9	3.1
30	7.6	4.8	4.0

Remarks.--No known regulation or diversion.

Average discharge.--100 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
51	35	22	13	10	8.0	5.8	4.4	3.8

4985. Charlotte Creek at West Davenport, N. Y. Map No. 7

LOCATION.--Lat 42°26'40", long 74°57'50", on right bank at downstream side of highway bridge at West Davenport, Delaware County, 700 ft upstream from small tributary. Prior to October 1956, at site 1.7 miles upstream.
DRAINAGE AREA.--167 sq mi.
AVERAGE DISCHARGE.--22 years, 261 cfs.

MINIMUM DAILY DISCHARGE.--4.5 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	4.7	90-day	10.7
7-day	5.3	120-day	14.5
14-day	6.3	150-day	17.8
30-day	7.4	183-day	31.8
60-day	8.8	274-day	59.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	13	8.8	6.6	5.2	4.4
7	15	9.8	7.5	5.8	5.0
30	21	13	10	7.8	6.7

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	2,000	880	590	470	380	265	190	135	96	65	42	33	25	17	12	9.7	8.3	6.4
1931-60	1,900	890	590	450	370	255	185	130	93	62	40	31	23	16	12	9.5	8.0	6.0

Remarks.-- No known regulation or diversion.
Prior to October 1956, published as "at Davenport Center."

4990. Otego Creek near Oneonta, N. Y. Map No. 8

LOCATION.--Lat 42°27'00", long 75°06'50", on right bank 1 1/2 miles south of West Oneonta, 1 3/4 miles upstream from mouth, and 2 3/4 miles west of Oneonta, Otsego County.
DRAINAGE AREA.--108 sq mi.
AVERAGE DISCHARGE.--20 years, 175 cfs.

MINIMUM DAILY DISCHARGE.--6.0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1941-59 RECORDS

Period	Discharge	Period	Discharge
3-day	6.3	90-day	11.4
7-day	6.5	120-day	12.0
14-day	7.4	150-day	14.6
30-day	9.3	183-day	22.6
60-day	10.3	274-day	47.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1941-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	12	8.0	6.8	6.0	5.6
7	13	9.0	7.6	6.8	6.4
30	16	11	9.5	8.7	8.4

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1941-60	1,300	600	400	305	255	185	135	99	71	48	31	25	19	15	11	9.7	8.5	7.0
1931-60	1,200	590	390	300	240	165	120	89	64	45	30	24	19	14	11	9.7	8.6	7.0

Remarks.-- No known regulation or diversion.

5000. Ouleout Creek at East Sidney, N. Y. Map No. 10

LOCATION.--Lat 42°20'00", long 75°14'05", on right bank a quarter of a mile downstream from highway bridge, half a mile downstream from East Sidney Dam, at East Sidney, Delaware County, and 3 1/2 miles upstream from mouth.
DRAINAGE AREA.--102 sq mi.
AVERAGE DISCHARGE.--20 years, 175 cfs (adjusted).

MINIMUM DAILY DISCHARGE.--1.2 cfs, *3.6 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1941-59 RECORDS

Period	Discharge		Period	Discharge
3-day	1.3	*4.3	90-day	9.0
7-day	2.3	*4.5	120-day	11.0
14-day	5.4		150-day	19.7
30-day	6.4		183-day	26.8
60-day	8.5		274-day	50.0

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1941-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	7.6	4.2	3.1	2.5	2.2
7	9.3	5.5	4.5	3.9	3.7
30	13	8.2	7.0	6.3	6.0

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1941-49	1,300	600	390	300	240	165	120	85	63	44	28	21	15	10	8.4	7.6	6.8	2.0
1950-60	1,500	640	400	310	260	185	140	100	70	47	29	22	16	10	7.2	6.2	5.4	4.0
1931-60 a/	1,500	630	410	310	250	170	120	91	67	47	30	23	17	11	7.0	5.4	4.4	3.1

Remarks.-- Since November 1949, high flows regulated by East Sidney Reservoir.
Unusual regulation in August 1949 caused by upstream construction work; asterisk (*) indicates 2nd lowest mean discharge not affected by regulation.
a/ Based on pattern of regulation 1950-60 water years.

5004.95 Martin Brook near Unadilla, N. Y. Map No. 11

LOCATION.--Lat 42°20'33", long 75°18'51", on left bank 1.2 miles north of Unadilla, and 1.5 miles upstream from mouth, Otsego County.
DRAINAGE AREA.--2.21 sq mi.
RECORDS AVAILABLE.--9 discharge measurements (1954-55, 1961, 1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	Dry	Dry	Dry
7	Dry	Dry	Dry
30	Dry	Dry	Dry

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
-	-	-	-	-	-	-	-	-

Remarks.--No known regulation or diversion.
Crest-stage gage only; insufficient data to determine duration of daily flow.

5005. Susquehanna River at Unadilla, N. Y. Map No. 12

LOCATION.--Lat 42°19'15", long 75°19'00", on right bank 25 ft downstream from highway bridge at Unadilla, Otsego County, and 1 mile upstream from Carrs Creek.
DRAINAGE AREA.--984 sq mi.
AVERAGE DISCHARGE.--22 years, 1,626 cfs.

MINIMUM DAILY DISCHARGE.--58 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	73.3	90-day	117
7-day	79.4	120-day	129
14-day	86.7	150-day	160
30-day	95.5	183-day	227
60-day	104	274-day	381

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	110	77	66	60	56
7	135	94	84	78	76
30	190	125	105	96	91

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	10,000	5,300	3,700	3,000	2,500	1,800	1,300	940	650	460	320	260	210	160	120	100	90	77
1931-60	9,800	5,300	3,700	3,000	2,400	1,700	1,200	870	620	450	300	250	200	160	115	98	86	72

Remarks.-- Some diurnal fluctuation caused by powerplants above station. Slight regulation by upstream lakes and reservoirs.

5008. Carrs Creek at Unadilla, N. Y. Map No. 13

LOCATION.-- Lat 42°18'54", long 75°20'03", at bridge on Unadilla-Sidney Road, 0.15 mile upstream from mouth, and 1 mile southwest of Unadilla, Delaware County.
DRAINAGE AREA.--29.6 sq mi.
RECORDS AVAILABLE.--20 discharge measurements (1954-55, 1957-62, 1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	Trace	0	0
7	0.1	0	0
30	0.8	Trace	0

Average discharge.-- 45 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
24	17	11	5.8	3.5	1.4	0.2	0	0

Remarks.-- No known regulation or diversion.

5009.8 Beaver Creek near South Edmeston, N. Y. Map No. 14

LOCATION.-- Lat 42°43'36", long 75°18'10", at bridge on State Highway 8, about 1 mile upstream from mouth, 1.4 miles north of Columbus Quarter, and 3 miles north of South Edmeston, Chenango County.
DRAINAGE AREA.-- 32.7 sq mi.
RECORDS AVAILABLE.-- 6 discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.7	0.3	0.2
7	1.0	.5	.4
30	1.8	.8	.6

Average discharge.-- -cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
-	-	-	-	-	2	1	0.6	0.4

Remarks.--No known regulation or diversion.

5009.9 Center Brook at New Berlin, N. Y. Map No. 15

LOCATION.--Lat 42°38'39", long 75°19'48", at bridge on State Highway 8, 0.4 mile upstream from mouth, and 0.8 mile north of New Berlin, Chenango County.
DRAINAGE AREA.-- 22.4 sq mi.
RECORDS AVAILABLE.-- 9 discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Average discharge.-- -cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
-	-	-	-	-	0	0	0	0

Remarks.--Stream was dry at all times when inspected.

5010. Unadilla River near New Berlin, N. Y. — Map No. 16

LOCATION.--Lat 42°38'35", long 75°19'25", on right bank 150 ft upstream from site of old highway bridge, a quarter of a mile downstream from Center Brook, and 1 1/2 miles north of New Berlin, Chenango County.
DRAINAGE AREA.-- 196 sq mi.
AVERAGE DISCHARGE.-- 36 years, 330 cfs.

MINIMUM DAILY DISCHARGE.--8.0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1925-59 RECORDS

Period	Discharge	Period	Discharge
3-day	8.3	90-day	18.9
7-day	10.6	120-day	20.5
14-day	11.4	150-day	24.3
30-day	14.2	183-day	29.2
60-day	15.9	274-day	40.6

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1925-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	21	14	11	9.5	8.7
7	25	17	14	12	12
30	35	23	19	16	15

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1925-60	2,300	1,100	770	600	480	340	250	180	130	93	60	47	36	26	20	17	15	12
1931-60	2,400	1,100	760	580	470	330	240	180	130	90	59	46	35	26	20	17	15	12

Remarks.-- No known regulation or diversion.

5012. Wharton Creek at New Berlin, N. Y. — Map No. 17

LOCATION.-- Lat 42°37'34", long 75°18'24", at bridge on State Highway 80, 0.8 mile east of New Berlin, Chenango County.
DRAINAGE AREA.-- 89.8 sq mi.
RECORDS AVAILABLE.-- 16 discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	13.5	10	9
7	14.5	11	10
30	18	12.5	11.5

Remarks.--No known regulation or diversion.

Average discharge.-- 150cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
75	54	38	26	22	18	14	12	11

5015. Sage Brook near South New Berlin, N. Y. — Map No. 18

LOCATION.--Lat 42°31'55", long 75°25'30", on right bank 1 1/2 miles upstream from mouth and 2 1/2 miles west of South New Berlin, Chenango County.
DRAINAGE AREA.-- 0.70 sq mi.
AVERAGE DISCHARGE.-- 27 years, 1.08 cfs.

MINIMUM DAILY DISCHARGE.--Trace

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1934-59 RECORDS

Period	Discharge	Period	Discharge
3-day	Trace	90-day	0.013
7-day	Trace	120-day	.016
14-day	Trace	150-day	.022
30-day	0.004	183-day	.052
60-day	.01	274-day	.18

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1934-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	0.014	0.005	0.001	Trace	Trace
7	.019	.007	.003	Trace	Trace
30	.034	.012	.007	0.005	0.004

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1934-60	10	4.0	2.6	1.9	1.5	1.0	0.70	0.50	0.33	0.19	0.08	0.05	0.03	0.02	0.01	0.005	0.003	0.001
1931-60	10	4.0	2.6	1.9	1.5	1.0	.70	.49	.31	.18	.08	.05	.03	.02	.008	.004	.002	.001

Remarks.--No known regulation or diversion.

5015.1 Great Brook at Holmesville, N. Y. — Map No. 19

LOCATION.-- Lat 42°31'04", long 75°23'35", at bridge on State Highway 8, 0.5 mile north of Holmesville, and 0.7 mile upstream from mouth, Chenango County.
DRAINAGE AREA.-- 25.9 sq mi.
RECORDS AVAILABLE.-- 7 discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.0	0.4	0.2
7	1.5	.6	.3
30	2.0	1.0	.6

Remarks.--Unknown amount of water diverted out of basin from Chenango Lake for city of Norwich water supply.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
-	-	-	-	-	3.2	1.6	0.8	0.5

5020. Butternut Creek at Morris, N. Y. Map No. 20

LOCATION.--Lat 42°32'45", long 75°14'20", on right bank 15 ft upstream from highway bridge at Morris, Otsego County, and 1,100 ft upstream from Calhoun Creek.
DRAINAGE AREA.--59.6 sq mi.
AVERAGE DISCHARGE.--22 years, 98.2 cfs.

MINIMUM DAILY DISCHARGE.--1.3 cfs

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	2.2	90-day	4.9
7-day	3.3	120-day	5.7
14-day	3.7	150-day	7.6
30-day	4.1	183-day	9.5
60-day	4.3	274-day	21.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	3.6	1.9	1.6	1.4	1.3
7	6.5	5.0	4.3	3.5	3.0
30	8.2	6.3	5.7	5.0	4.5

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	750	335	225	175	140	99	71	53	38	26	17	13	9.7	6.6	4.5	3.4	2.6	1.7
1931-60	700	320	215	165	135	94	68	49	35	25	16	13	9.9	6.7	4.4	3.4	2.6	1.7

Remarks.--Diurnal fluctuation at low flow caused by mill above station.

5025. Unadilla River at Rockdale, N. Y. Map No. 21

LOCATION.-- Lat 42°22'35", long 75°24'20", on right bank 400 ft downstream from highway bridge at Rockdale, Chenango County, and three-quarters of a mile downstream from Kent Brook.
DRAINAGE AREA.-- 518 sq mi.
AVERAGE DISCHARGE.-- 26 years, 842 cfs.

MINIMUM DAILY DISCHARGE.-- 33 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1931-32, 1938-59 RECORDS

Period	Discharge	Period	Discharge
3-day	33.3	90-day	47.7
7-day	36.3	120-day	53.3
14-day	36.9	150-day	67.8
30-day	40.0	183-day	80.0
60-day	43.0	274-day	161

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1931-32, 1938-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	66	45	38	34	32
7	72	50	42	37	35
30	98	67	56	48	45

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1931-33, 1938-60	6,200	2,900	2,000	1,500	1,250	860	620	460	330	230	150	125	98	74	57	49	44	37
1931-60	5,800	2,900	2,000	1,550	1,300	890	630	450	320	230	160	130	105	78	60	52	45	36

Remarks.--No known regulation or diversion.

5025.5 Guilford Creek at East Guilford, N. Y. Map No. 22

LOCATION.-- Lat 42°20'22", long 75°24'17", at bridge on State Highway 8, at East Guilford, and 0.5 mile upstream from mouth, Chenango County.
DRAINAGE AREA.-- 17.8 sq mi.
RECORDS AVAILABLE.-- 6 discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.0	0.1	Trace
7	1.5	.3	Trace
30	4.0	1.0	0.5

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
-	-	-	-	-	4.5	2.0	0.6	0.2

Remarks.--Unincorporated village of Guilford, about 6 miles northwest of station, uses about 0.1 cfs for public water supply. Most of this water is returned to the ground thru the use of septic tanks.

5026.8 Big Brook near Bennettsville, N. Y. Map No. 23

LOCATION.-- Lat 42°15'40", long 75°28'25", at bridge on County Highway 39, 0.7 mile upstream from mouth, 1.5 miles west of Bennettsville, Chenango County.
DRAINAGE AREA.--39.6 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.5	Trace	Dry
7	.8	0.2	Trace
30	1.5	.6	0.3

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.3	1.1	0.4	0.2

Remarks.--No known regulation or diversion.

5027. Kelsey Creek at Afton, N. Y. Map No. 24

LOCATION.-- Lat 42°13'49", long 75°31'23", at bridge on State Highway 7, at Afton, Chenango County.

DRAINAGE AREA.--41.2 sq mi.
RECORDS AVAILABLE.--12 Discharge measurements (1957-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.8	0.2	0.1
7	1.2	.4	.2
30	3.7	1.0	.6

Average discharge.-- 70 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
36	26	17	9.7	6.5	3.6	1.5	0.5	0.3

Remarks.--No known regulation or diversion.

5027.1 Wylie Brook at Harpursville, N. Y.

Map No. 25

LOCATION.--Lat 42°11'26", long 75°37'02", at bridge on State Highway 7, 0.5 mile northeast of Harpursville, and 0.7 mile upstream from mouth, Broome County.
DRAINAGE AREA.--24.8 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.0	0.1	Trace
7	1.5	.3	0.1
30	2.5	1.0	.6

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.9	1.6	0.7	0.3

5027.12 Belden Brook at Harpursville, N. Y.

Map No. 26

LOCATION.-- Lat 42°10'50", long 75°37'26", at bridge on Maple Street, at Harpursville, Broome County, 0.5 mile upstream from mouth.
DRAINAGE AREA.-- 11.6 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.4	Trace	Trace
7	.6	0.1	Trace
30	1.3	.5	0.3

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.5	0.8	0.3	0.1

5027.2 Sage Creek at Ouaquaga, N. Y.

Map No. 27

LOCATION.--Lat 42°07'04", long 75°39'22", at bridge on State Highway 79, 0.1 mile upstream from mouth, 1 mile south of Duaquaga, Broome County.
DRAINAGE AREA.-- 13.0
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.1	Dry	Dry
7	.1	Trace	Trace
30	.2	0.1	0.1

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	0.2	0.1	0.05	0.01

5027.3 Occanum Creek at Windsor, N. Y.

Map No. 28

LOCATION.--Lat 42°04'54", long 75°38'26", at bridge on State Highway 79, 0.25 mile upstream from mouth, and 0.4 mile north of Windsor, Broome County.
DRAINAGE AREA.--14.4 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	0	0	0	0

5027.4 Tuscarora Creek at Damascus, N. Y.

Map No. 29

LOCATION.-- Lat 42°03'20", long 75°36'46", at bridge on Old State Highway 17, at Damascus, 0.5 mile upstream from mouth, Broome County.
DRAINAGE AREA.-- 8.74 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.1	0	0
7	.3	.1	0
30	.7	.2	.1

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.0	0.4	0.1	0

5028. Snake Creek at Corbettsville, N. Y. Map No. 30

LOCATION.--Lat 42°00'53", long 75°47'20", at bridge on State Highway 7A, at Corbettsville, Broome County.

DRAINAGE AREA.-- 75.0 sq mi.
RECORDS AVAILABLE.-- 14 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	D.1	0	D
7	.3	Trace	0
30	2.4	.2	Trace

Remarks.-- No known regulation or diversion.

Average discharge.-- 125 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
63	45	30	17	10	4.4	0.4	Trace	D

5029. Little Snake Creek at Conklin, N. Y. Map No. 31

LOCATION.-- Lat 42°01'40", long 75°48'01", at bridge on State Highway 7, 0.5 mile south of Conklin, Broome County.
DRAINAGE AREA.-- 30.4 sq mi.
RECORDS AVAILABLE.-- 16 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	Dry	Dry	Dry
7	Dry	Dry	Dry
30	Dry	Dry	Dry

Remarks.-- No known regulation or diversion.

Average discharge.-- 50 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
28	20	13	5.7	2.6	0.1	0	0	0

5030. Susquehanna River at Conklin, N. Y. Map No. 32

LOCATION.-- Lat 42°02'10", long 75°48'10", on left bank at downstream side of highway bridge at Conklin, Broome County, 0.7 mile downstream from Little Snake Creek and 3.5 miles downstream from Pennsylvania-New York State line.

DRAINAGE AREA.--2,240 sq mi.
AVERAGE DISCHARGE.--47 years, 3,654 cfs.

MINIMUM DAILY DISCHARGE.-- 106 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1914-59 RECORDS

Period	Discharge	Period	Discharge
3-day	124	90-day	216
7-day	139	120-day	280
14-day	152	150-day	354
30-day	159	183-day	390
60-day	190	274-day	585

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1914-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	310	200	160	130	120
7	350	230	185	160	150
30	450	280	225	190	175

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																		
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1914-60	24,000	12,500	8,600	6,600	5,300	3,700	2,700	2,000	1,500	1,100	730	600	470	350	265	230	200	160
1931-60	24,000	12,000	8,600	6,600	5,300	3,700	2,700	2,000	1,450	1,000	670	540	420	315	245	210	190	150

Remarks.--Diurnal fluctuation at low flow caused by mill several miles above station. Minor regulation by upstream lakes and reservoirs.

5033. Park Creek near Binghamton, N. Y. Map No. 33

LOCATION.--Lat 42°05'38", long 75°48'29", at bridge on U.S. Highway 11, 0.3 mile upstream from mouth, and 1.1 miles east of city line of Binghamton, Broome County.
DRAINAGE AREA.-- 15.7 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.2	D	0
7	.5	Trace	0
30	1.2	.3	.1

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs.

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.5	0.4	0.1	D

5039.8 Chenango River at Eaton, N. Y. Map No. 34

LOCATION.--Lat 42°51'02", long 75°36'21", at bridge on London Road at Eaton, Madison County, 0.1 mile upstream from Eaton Brook, and 0.1 mile downstream from State Highway 26.

DRAINAGE AREA.-- 24.3 sq mi.
RECORDS AVAILABLE.-- 4 Discharge measurements (1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Remarks.--No known regulation or diversion.
Insufficent data to determine duration of daily or low frequency flows.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

5047.8 Sangerfield River near Earlville, N. Y. — Map No. 35

LOCATION.--Lat 42°43'05", long 75°32'26", at bridge on State Highway 12B, 0.1 mile upstream from mouth, and 1.5 miles south of Earlville, Chenango County.
DRAINAGE AREA.-- 61.4 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	11	4	3
7	14	6	3.5
30	21	10	6

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	22	14	7.4	4.9

Remarks.-- Source of water supply for village of Earlville. Most of water diverted out of basin.

5048. Pleasant Brook near Sherburne, N. Y. — Map No. 36

LOCATION.--Lat 42°42'04", long 75°32'15", at bridge on dirt road, 0.2 mile downstream from Cold Spring Brook, 0.5 mile north of State Highway 80, and 2.5 miles northwest of Sherburne, Chenango County.
DRAINAGE AREA.-- 38.6 sq mi.
RECORDS AVAILABLE.-- 17 Discharge measurements (1956-62, 1964).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.4	0	0
7	.8	Trace	0
30	1.8	.5	.2

Average discharge.-- 60 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
24	15	9.2	4.8	3.2	1.8	0.8	0.2	0

Remarks.-- No known regulation or diversion.

5049. Handsome Brook at Sherburne, N. Y. — Map No. 37

LOCATION.--Lat 42°41'26", long 75°30'15", at bridge on State Highway 12B, 0.4 mile upstream from mouth, 0.5 mile north of village line at Sherburne, Chenango County.
DRAINAGE AREA.-- 37.9 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	3	1	0.5
7	4	2	1
30	7	3	2

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	7	4	2	1

Remarks.--No known regulation or diversion.

5050. Chenango River at Sherburne, N. Y. — Map No. 38

LOCATION.--Lat 42°40'45", long 75°30'40", on right bank 20 ft downstream from Pratts Bridge, half a mile west of Sherburne, Chenango County, and half a mile downstream from Handsome Brook.
DRAINAGE AREA.-- 264 sq mi.
AVERAGE DISCHARGE.-- 22 years, 415 cfs.
MINIMUM DAILY DISCHARGE.-- 18 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	18.0	90-day	25.9
7-day	19.0	120-day	28.4
14-day	19.7	150-day	35.4
30-day	21.3	183-day	40.8
60-day	23.5	274-day	71.8

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	38	25	20	18	16
7	42	27	21	19	18
30	51	31	25	21	20

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	2,750	1,350	990	770	630	430	310	230	170	120	80	65	52	39	29	25	23	20
1931-60	2,700	1,350	940	730	590	420	310	230	165	115	80	65	50	37	28	24	21	18

Remarks.--Slight diurnal fluctuation at low flow caused by mill several miles above station. Water diverted from Chenango River basin into Oriskany Creek through Oriskany Creek feeder at Solsville for more than 100 years. Incomplete records (1954-58) indicate that amount of water diverted averages about 10 cfs during summer months.

5050.2 Cold Brook near North Norwich, N. Y. — Map No. 39

LOCATION.--Lat 42°35'39", long 75°31'48", at bridge on State Highway 12, 0.4 mile upstream from mouth, and 1.6 miles south of North Norwich, Chenango County.
DRAINAGE AREA.-- 6.50 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.3	Trace	0
7	.5	0.2	Trace
30	1.0	.5	.3

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.0	0.6	0.3	0.1

Remarks.--No known regulation or diversion.

5055. Canasawacta Creek near South Plymouth, N. Y. Map No. 4D

LOCATION.--Lat 42°33'50", long 75°33'10", on right bank 1.4 miles southeast of South Plymouth, Chenango County, 2 miles northwest of Norwich, 2.8 miles downstream from East Branch, and 4.2 miles upstream from mouth.
DRAINAGE AREA.--58.3 sq mi.
AVERAGE DISCHARGE.--15 years, 106 cfs.
MINIMUM DAILY DISCHARGE.--0.4 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1946-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.5	90-day	3.1
7-day	.7	120-day	4.8
14-day	1.0	150-day	5.7
30-day	1.8	183-day	8.4
60-day	2.6	274-day	29.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1946-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	1.4	0.6	0.4	0.4	--
7	2.5	1.2	.8	.6	--
30	5.3	2.8	2.1	1.8	--

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1946-60	860	370	240	185	150	110	78	56	40	25	12	8.4	5.7	3.7	2.2	1.4	1.0	0.6
1931-60	800	370	240	185	150	100	72	51	35	22	11	7.9	5.4	3.4	1.9	1.2	.8	.5

Remarks.--Slight diurnal fluctuation caused by grist mill 1.8 miles above station.

5059.2 Mill Brook near Oxford, N. Y. Map No. 41

LOCATION.--Lat 42°25'44", long 75°37'26", at bridge on State Highway 12, 0.25 mile upstream from mouth, and 1.7 miles south of Oxford, Chenango County.
DRAINAGE AREA.--13.0 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.0	0.3	0.1
7	1.5	.6	.3
30	2.5	1.2	.7

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.5	1.5	0.8	0.5

5059.5 Bowman Creek near Tyner, N. Y. Map No. 42

LOCATION.--Lat 42°24'11", long 75°38'08", at bridge on State Highway 12, 0.2 mile upstream from mouth, and 2.4 miles southeast of Tyner, Chenango County.
DRAINAGE AREA.--26.8 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.5	0	0
7	1	Trace	0
30	3.5	.5	.1

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	3	1	D.1	D

5063. Wheeler Brook near Brisben, N. Y. Map No. 43

LOCATION.--Lat 42°20'43", long 75°42'38", at bridge on East River Road, 0.15 mile upstream from mouth, and 2.1 miles southwest of Brisben, Chenango County.
DRAINAGE AREA.--10.6 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.7	0.3	0.1
7	1.0	.4	.2
30	1.8	.8	.5

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.8	1.1	0.5	0.3

5063.5 Tillotson Creek near Brisben, N. Y. Map No. 44

LOCATION.--Lat 42°21'16", long 75°42'50", at bridge on State Highway 12, 0.4 mile upstream from mouth, and 2 miles southwest of Brisben, Chenango County.
DRAINAGE AREA.--9.65 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.2	0	0
7	.6	Trace	0
30	1.3	.3	.1

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1	0.6	0.1	0

5064. Spring Brook near Brisben, N. Y. Map No. 45

LOCATION.--Lat 42°21'01", long 75°43'58", at bridge on State Highway 12, 0.2 mile upstream from mouth, and 2.9 miles southwest of Brisben, Chenango County.
DRAINAGE AREA.--17.5 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.4	0	0
7	.7	0	0
30	1.9	.2	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	0.6	0.1	0

5070. Chenango River at Greene, N. Y. Map No. 46

LOCATION.--Lat 42°19'30", long 75°46'15", on left bank 1,700 ft downstream from highway bridge in Greene, Chenango County, and half a mile downstream from Birdsall Creek.
DRAINAGE AREA.--598 sq mi.
AVERAGE DISCHARGE.--23 years, 932 cfs.

MINIMUM DAILY DISCHARGE.-- 38 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1938-59 RECORDS

Period	Discharge	Period	Discharge
3-day	39.0	90-day	50.9
7-day	40.9	120-day	56.5
14-day	43.6	150-day	68.6
30-day	46.0	183-day	78.7
60-day	47.7	274-day	144

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1938-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	75	53	44	38	36
7	85	58	49	43	40
30	110	72	60	51	48

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	6,200	3,200	2,250	1,750	1,400	980	710	530	390	270	180	145	115	85	65	55	49	42
1931-60	6,000	3,200	2,200	1,700	1,400	960	710	530	370	260	175	140	110	80	61	53	48	42

Remarks.--Diversion above station at Solsville through Oriskany Creek feeder into Mohawk River in Hudson River basin for Erie (Barge) Canal operation. Diversion averages about 10 cfs during the summer months.

5074.9 Pond Brook at Smithville Flats, N. Y. Map No. 47

LOCATION.--Lat 42°23'48", long 75°48'31", at bridge on State Highway 41 and 220, at Smithville Flats, and 0.25 mile upstream from mouth, Chenango County.
DRAINAGE AREA.-- 9.55 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65)

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Remarks.-- No known regulation or diversion.
Insufficient data to develop duration or frequency curves.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

5075. Genegantslet Creek at Smithville Flats, N. Y. Map No. 48

LOCATION.-- Lat 42°23'40", long 75°48'15", on left bank 530 ft downstream from highway bridge at Smithville Flats, Chenango County, and 1,500 ft downstream from Pond Brook.
DRAINAGE AREA.-- 83.1 sq mi.
AVERAGE DISCHARGE.-- 22 years, 142 cfs.

MINIMUM DAILY DISCHARGE.-- 0.5 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.5	90-day	1.4
7-day	.5	120-day	2.0
14-day	.6	150-day	4.2
30-day	.6	183-day	5.7
60-day	1.0	274-day	16.9

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	5.0	2.5	1.4	0.8	0.6
7	6.0	3.1	1.9	1.2	.9
30	9.5	4.5	2.7	1.6	1.2

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	1,300	520	330	240	190	130	92	65	46	30	15	11	8.4	5.5	3.3	2.0	1.1	0.6
1931-60	1,250	500	315	230	180	120	82	58	40	25	14	11	8.1	5.4	3.1	1.8	1.0	.6

Remarks.--Diurnal fluctuation at low and medium flow caused by gristmill 800 ft above station.

5079.5 West Branch Tioughnioga Creek near Cuyler, N. Y. Map No. 49

LOCATION.-- Lat 42°47'06", long 75°57'47", at bridge in Keeney, 3.4 miles north of Cuyler, Cortland County.

DRAINAGE AREA.--35.0 sq mi.
RECORDS AVAILABLE.--13 Discharge measurements (1956-60, 1962, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	5	4	3.5
7	6	4.5	4
30	7	5	4.5

Remarks.--No known regulation or diversion.

Average discharge.-- 60 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
33	24	17	12	9.5	7.5	5.9	4.9	4.4

5080. Shackham Brook near Truxton, N. Y. Map No. 50

LOCATION.--Lat 42°46'00", long 76°01'10", on right bank a quarter of a mile downstream from small tributary, three-quarters of a mile upstream from mouth, and 5 miles north of Truxton, Cortland County.
DRAINAGE AREA.--3.12 sq mi.
AVERAGE DISCHARGE.--27 years, 5.68 cfs. MINIMUM DAILY DISCHARGE.--0.04 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1934-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.047	90-day	0.11
7-day	.049	120-day	.13
14-day	.058	150-day	.15
30-day	.070	183-day	.26
60-day	.088	274-day	1.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1934-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	0.11	0.07	0.06	0.05	0.04
7	.13	.08	.06	.05	.05
30	.18	.12	.09	.07	.06

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1934-60	51	21	14	10	8.0	5.3	3.7	2.7	1.8	0.95	0.40	0.28	0.20	0.13	0.09	0.08	0.07	0.06
1931-60	50	21	14	10	8.1	5.6	3.9	2.6	1.7	.90	.36	.27	.19	.13	.10	.08	.07	.06

Remarks.--No known regulation or diversion. This station is operated in connection with a study of the effect of reforestation on streamflow.

5082. Labrador Creek at Truxton, N. Y. Map No. 51

LOCATION.--Lat 42°42'43", long 76°01'51", at bridge on State Highway 13, at Truxton, and 0.8 mile upstream from mouth, Cortland County.
DRAINAGE AREA.--13.7 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.1	0.3	0
7	1.4	.4	.1
30	2.2	.9	.4

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.1	1.3	0.7	0.3

Remarks.--No known regulation or diversion.

5084. Chenango Creek near Truxton, N. Y. Map No. 52

LOCATION.--Lat 42°40'43", long 76°05'09", at bridge on county road, 1.2 miles upstream from mouth, and 2.6 miles south of Truxton, Cortland County.
DRAINAGE AREA.--30.0 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).
ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion.
Insufficient range in measured discharge to develop duration or frequency curves.

5085. Albright Creek at East Homer, N. Y. Map No. 53

LOCATION.--Lat 42°40'10", long 76°06'15", on left bank a quarter of a mile upstream from highway bridge in East Homer, Cortland County, and half a mile upstream from mouth.
DRAINAGE AREA.--7.08 sq mi.
AVERAGE DISCHARGE.--21 years, 12.3 cfs. MINIMUM DAILY DISCHARGE.--0.03 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1940-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.035	90-day	0.30
7-day	.044	120-day	.46
14-day	.056	150-day	.56
30-day	.14	183-day	.89
60-day	.25	274-day	3.3

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1940-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	0.27	0.11	0.06	0.03	0.02
7	.37	.15	.08	.04	.03
30	.74	.35	.21	.12	.09

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1940-60	105	42	28	22	17	12	8.6	6.4	4.6	2.9	1.4	0.93	0.64	0.39	0.22	0.15	0.10	0.06
1931-60	96	41	28	21	17	12	8.3	6.0	4.1	2.6	1.4	1.0	.67	.37	.20	.14	.10	.06

Remarks.--No known regulation or diversion. This station is operated in connection with a study of the effect of reforestation on streamflow.
Prior to October 1947, published as "East Homer Creek".

5085.5 East Branch Tioughnioga River near Cortland, N. Y. Map No. 54

LOCATION.--Lat 42°37'35", long 75°08'56", at bridge on county road off State Highway 13, 2.2 miles northeast of Cortland, Cortland County.
DRAINAGE AREA.--193 sq mi.
RECORDS AVAILABLE.--14 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	20	12	9
7	24	13	10
30	30	18	13

Remarks.-- No known regulation or diversion.

Average discharge.-- 320cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
155	115	79	53	40	30	21	15	13

5087. Cold Brook at Little York, N. Y. Map No. 55

LOCATION.--Lat 42°41'08", long 76°10'11", at bridge on State Highway 281, 0.4 mile upstream from mouth, and 0.75 mile south of Little York, Cortland County.
DRAINAGE AREA.--15.4 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.6	Trace	0
7	1.0	0.1	0
30	1.7	.5	.1

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	2	0.8	0.2	0.1

5088. Factory Brook at Homer, N. Y. Map No. 56

LOCATION.--Lat 42°38'39", long 76°11'18", at bridge on State Highway 41, at Homer, about 1 mile upstream from mouth, Cortland County.
DRAINAGE AREA.-- 15.8 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	4.1	2.1	1.4
7	5.1	2.5	1.7
30	6.5	3.9	2.6

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	6.6	4.7	3.0	2.3

5089.8 West Branch Tioughnioga River at Cortland, N. Y. Map No. 57

LOCATION.--Lat 42°36'27", long 76°10'01", at bridge on State Highway 13, at Cortland, Cortland County.

DRAINAGE AREA.-- 100 sq mi.
RECORDS AVAILABLE.-- 17 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	23	15	11
7	26	17	13
30	30	21	17

Remarks.-- No known regulation or diversion.

Average discharge.-- 170cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
100	75	58	44	38	32	25	19	17

5090. Tioughnioga River at Cortland, N. Y. Map No. 58

LOCATION.--Lat 42°36'10", long 76°09'35", on right bank at upstream side of Elm Street Bridge at Cortland, Cortland County, 0.4 mile downstream from confluence of East and West Branches.
DRAINAGE AREA.--296 sq mi.
AVERAGE DISCHARGE.--22 years, 493 cfs.

MINIMUM DAILY DISCHARGE.--17 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	18.7	90-day	30.9
7-day	21.1	120-day	35.4
14-day	21.7	150-day	40.1
30-day	23.5	183-day	47.4
60-day	26.7	274-day	83.6

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	48	30	22	17	15
7	53	33	26	22	20
30	60	38	29	25	23

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	3,500	1,700	1,150	880	710	500	370	270	200	140	93	75	60	47	36	30	26	20
1931-60	3,500	1,600	1,100	860	700	490	360	265	195	140	95	78	63	47	36	31	27	21

Remarks.--Diurnal fluctuation at low and medium flow caused by powerplants in mills on West Branch. The flow from 15.7 sq mi of the Middle Branch during the summer months may be diverted into DeRuyter Reservoir in Oswego River basin.

5090.2 Trout Brook near Blodgett Mills, N. Y. — Map No. 59

LOCATION.--Lat 42°35'09", long 76°07'47", at bridge on U.S. Highway 11, 0.4 mile upstream from mouth, and 1.2 miles north of Blodgett Mills, Cortland County.
DRAINAGE AREA.-- 40.5 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.5	0.6	0.3
7	2.5	.7	.4
30	4.0	1.4	.8

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	4.5	2.0	1.0	0.6

Remarks.-- No known regulation or diversion.

5092. Gridley Creek at Messengerville, N. Y. — Map No. 60

LOCATION.--Lat 42°29'19", long 76°04'26", at bridge on Francis Road, at Messengerville, and 0.1 mile upstream from mouth, Cortland County.
DRAINAGE AREA.--16.1 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion.
Insufficient range in measured discharge to develop duration or frequency curves.

5093. Hunts Creek at Marathon, N. Y. — Map No. 61

LOCATION.--Lat 42°27'21", long 76°01'53", at bridge on County Highway 116, 0.2 mile downstream from unnamed tributary, 0.2 mile north of Marathon village line, and 1.3 miles upstream from mouth, Cortland County.
DRAINAGE AREA.-- 10.8 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (1935, 1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.3	0	0
7	.7	0	0
30	1.4	.1	0

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.5	0.5	0.0	0

Remarks.-- No known regulation or diversion.
Slope-area determination of peak discharge on July 8, 1935 published as "Willett Creek".

5094. Jennings Creek at Killawog, N. Y. — Map No. 62

LOCATION.--Lat 42°24'05", long 76°01'17", at bridge on Whiting Hill Road, at Killawog, and 0.3 mile upstream from mouth, Broome County.
DRAINAGE AREA.--14.4 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.9	0.3	0.1
7	1.3	.4	.1
30	1.8	.8	.4

Average discharge.-- - cfs

Duration of daily discharge

Discharge,in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.9	1.1	0.5	0.3

Remarks.--No known regulation or diversion.

5095. Dudley Creek at Lisle, N. Y. — Map No. 63

LOCATION.--Lat 42°21'19", long 76°00'17", at bridge on Whiting Hill Road, at Lisle, 0.1 mile upstream from from mouth, Broome County.
DRAINAGE AREA.-- 31.8 [a/]
RECORDS AVAILABLE.-- Daily discharges July 1938 to June 1940, 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	3.0	2.0	1.5
7	3.5	2.3	1.8
30	4.5	3.0	2.4

Average discharge.-- 50 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
22	16	11	7.5	6.2	4.8	3.5	2.5	2.1

Remarks.-- No known regulation or diversion. Duration and frequency curves developed using results of discharge measurements and mean monthly discharges.
a/ Published as "30.0 sq mi" 1938-40.

5098. Mud Creek at Union Valley, N. Y. Map No. 64

LOCATION.-- Lat 42°37'56", long 75°52'43", at bridge, 0.3 mile east of Union Valley, Chenango County.

DRAINAGE AREA.-- 23.8 sq mi.
RECORDS AVAILABLE.-- 12 Discharge measurements (1957-62).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years 2	5	10
1	2.5	1.7	1.4
7	3.1	2.0	1.6
30	4.6	2.9	2.3

Remarks.--No known regulation or diversion.

Average discharge.-- 40 cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
24	18	13	8.3	6.3	4.6	3.2	2.3	1.9

5099. Pond Creek at Taylor, N. Y. Map No. 65

LOCATION.--Lat 42°34'01", long 75°53'33", at bridge on State Highway 26, at Taylor, and 0.6 mile upstream from mouth, Cortland County.
DRAINAGE AREA.--7.49 sq mi.
RECORDS AVAILABLE.--5 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years 2	5	10
1	0.4	0	0
7	.7	.1	0
30	1.2	.3	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.3	0.5	0.1	0

5100. Otselic River at Cincinnatus, N. Y. Map No. 66

LOCATION.--Lat 42°32'30", long 75°54'00", on right bank 150 ft upstream from Mead Brook and 300 ft downstream from highway bridge at Cincinnatus, Cortland County.
DRAINAGE AREA.--148 sq mi.
AVERAGE DISCHARGE.--22 years, 274 cfs.

MINIMUM DAILY DISCHARGE.--4.1 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	4.2	90-day	9.9
7-day	4.3	120-day	10.7
14-day	5.0	150-day	13.3
30-day	6.3	183-day	15.4
60-day	7.6	274-day	40.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years 2	5	10	20	30
1	14	9.4	7.7	6.1	5.1
7	17	11	8.9	6.8	5.7
30	22	14	12	9.0	7.7

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time 1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	2,300	960	620	480	390	260	185	140	100	69	40	31	23	16	12	9.7	8.1	5.6
1931-60	2,200	950	600	450	360	250	185	135	98	68	41	31	24	17	12	9.7	8.0	5.6

Remarks.--No known regulation or diversion.

5105. Otselic River near Upper Lisle, N. Y. Map No. 67

LOCATION.--Lat 42°25'20", long 75°57'00", on left bank 300 ft downstream from Salzbury Bridge, half a mile downstream from Barry Run, 2 miles upstream from Upper Lisle, Broome County, and 9 miles upstream from Whitney Point Dam.
DRAINAGE AREA.--216 sq mi.
AVERAGE DISCHARGE.--23 years, 394 cfs.

MINIMUM DAILY DISCHARGE.-- 7.4 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1938-59 RECORDS

Period	Discharge	Period	Discharge
3-day	7.8	90-day	15.4
7-day	8.6	120-day	16.4
14-day	9.3	150-day	20.7
30-day	10.9	183-day	24.2
60-day	12.4	274-day	60.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1938-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years 2	5	10	20	30
1	22	14	11	8.8	7.8
7	25	16	12	10	8.9
30	32	19	15	12	11

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time 1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	3,300	1,350	890	690	550	380	275	200	145	100	60	46	34	24	18	15	13	10
1931-60	3,300	1,400	870	650	530	370	275	200	145	100	60	46	34	24	17	14	13	10

Remarks.--No Known regulation or diversion.

5107. Merrill Creek at Upper Lisle, N. Y. Map No. 68

LOCATION.--Lat 42°24'14", long 75°58'32", at bridge, 0.2 mile upstream from mouth, 0.8 mile northwest of Upper Lisle, Broome County.
DRAINAGE AREA.-- 20.9 sq mi.
RECORDS AVAILABLE.-- 14 Discharge measurements (1935, 1956-62).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years 2	5	10
1	0.9	0.6	0.5
7	1.1	.7	.6
30	1.5	.9	.6

Remarks.-- No known regulation or diversion.

Average discharge.-- 32 cfs

Duration of daily discharge
Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
13	8.7	5.2	2.7	1.9	1.4	1.0	0.7	0.6

5115. Tioughnioga River at Itaska, N. Y. Map No. 70

LOCATION.--Lat 42°17'55", long 75°54'30", on right bank at Itaska, Broome County, 3-3/4 miles downstream from Otselic River and village of Whitney Point and 6 miles upstream from mouth.
DRAINAGE AREA.--735 sq mi.
AVERAGE DISCHARGE.--31 years, 1,250 cfs a/.

MINIMUM DAILY DISCHARGE.--40 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1930-59 RECORDS

Period	Discharge	Period	Discharge
3-day	43.7	90-day	67.6
7-day	45.7	120-day	74.3
14-day	47.6	150-day	90.0
30-day	51.1	183-day	103
60-day	60.8	274-day	209

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1930-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	92	62	51	45	43
7	100	69	58	51	49
30	130	87	72	62	58

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1930-60	8,200	4,600	3,100	2,350	1,850	1,200	880	670	490	340	215	175	140	105	80	69	61	50
1931-60	8,400	4,600	3,100	2,350	1,850	1,250	890	670	490	330	215	175	140	100	77	67	60	50

Remarks.--Flood flows partly regulated since March 1942 by Whitney Point Reservoir. During summer months, flow from 15.7 sq mi of Middle Branch may be diverted into DeRuyter Reservoir in Oswego River basin.
a/ Adjusted for storage since September 1942.

5116. Halfway Brook near Itaska, N. Y. Map No. 71

LOCATION.--Lat 42°17'04", long 75°53'23", at bridge on State Highway 79, 0.1 mile upstream from mouth, and 1.4 miles southeast of Itaska, Broome County.
DRAINAGE AREA.--21.8 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.6	0	0
7	1.0	Trace	0
30	2.1	.6	Trace

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.1	0.9	0.1	0

Remarks.--No known regulation or diversion.

5125. Chenango River near Chenango Forks, N. Y. Map No. 72

LOCATION.--Lat 42°13'05", long 75°50'55", on left bank 1 1/2 miles downstream from Tioughnioga River and village of Chenango Forks, Broome County.
DRAINAGE AREA.--1,492 sq mi.
AVERAGE DISCHARGE.--47 years, 2,452 cfs (adj. for storage).

MINIMUM DAILY DISCHARGE.--88 cfs.

MINIMUM AVERAGE OISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1914-59 RECORDS

Period	Discharge	Period	Discharge
3-day	91.7	90-day	129
7-day	93.7	120-day	143
14-day	98.8	150-day	175
30-day	106	183-day	199
60-day	118	274-day	391

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1914-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	220	150	125	105	98
7	240	165	135	115	105
30	300	200	165	140	130

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1914-60	16,500	8,800	6,000	4,600	3,700	2,500	1,800	1,300	980	680	470	390	310	230	180	150	135	110
1931-60	16,500	8,500	5,800	4,400	3,500	2,400	1,750	1,250	920	650	440	360	280	210	160	140	125	105

Remarks.--Since March 1942, flood flows partly regulated by Whitney Point Reservoir. During summer months 10-20 cfs diverted out of basin.

5125.5 Page Brook near Port Crane, N. Y. Map No. 73

LOCATION.--Lat 42°11'53", long 75°49'31", at bridge on town road, 0.25 mile west of State Highway 369, 0.9 mile upstream from mouth, and about 2 miles north of Port Crane, Broome County.
DRAINAGE AREA.--34.1 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.8	0.4	0.3
7	1.0	.5	.4
30	1.8	.7	.5

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.9	0.8	0.4	0.3

Remarks.--No known regulation or diversion.

5126.5 Osborne Creek at Port Crane, N. Y. Map No. 74

LOCATION.--Lat 42°10'06", long 75°49'47", at bridge on State Highway 369, at Port Crane, 0.15 mile upstream from mouth and 0.45 mile downstream from Ballyhack Creek, Broome County.
DRAINAGE AREA.--24.9 sq mi.
RECORDS AVAILABLE.--6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs								
Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion. Insufficient range in measured discharge to develop duration or frequency curves.

5127.8 Thomas Creek at Chenango Bridge, N. Y. Map No. 75

LOCATION.--Lat 42°10'08", long 75°52'56", at bridge on state highway at Chanango Bridge, 0.15 mile upstream from mouth, and 0.25 mile east of State Highway 12.
DRAINAGE AREA.--8.69 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	2.3	1.0	0.8
7	2.9	1.5	.9
30	4.1	2.4	1.5

Average discharge.-- - cfs								
Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	4.0	2.8	1.5	0.9

Remarks.-- No known regulation or diversion.

5128. Castle Creek at Hinmans Corners, N. Y. Map No. 76

LOCATION.--Lat 42°10'06", long 75°54'01", at bridge on U.S. Highway 11, at Hinman Corners, Broome County, and 2.4 miles north of Binghamton.
DRAINAGE AREA.--28.9 sq mi.
RECORDS AVAILABLE.-- 15 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.2	0	0
7	.4	0	0
30	1.4	.1	0

Average discharge.-- 35cfs								
Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
16	11	7.5	4.5	2.9	1.4	0.3	0.1	0

Remarks.-- No known regulation or diversion.

5131. Fuller Hollow Creek at Johnson City, N. Y. Map No. 77

LOCATION.--Lat 42°05'48", long 75°57'56", at bridge on Vestal Road, 0.1 mile upstream from mouth, and 0.3 mile south of Johnson City, Broome County.
DRAINAGE AREA.-- 3.52 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs								
Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion. Insufficient range in measured discharge to develop duration or frequency curves.

5131.9 Little Choconut Creek at Stella, N. Y. Map No. 78

LOCATION.-- Lat 42°07'38", long 75°56'42", at bridge on Stella - Ireland Road, at Stella, Broome County, and 2.6 miles upstream from mouth.
DRAINAGE AREA.--12.2 sq mi.
RECORDS AVAILABLE.-- 1 Discharge measurement (1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs								
Duration of daily discharge								
Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion. Insufficient number of measurements to develop duration or frequency curves.

5132. Little Choconut Creek at Johnson City, N. Y. Map No. 79

LOCATION.-- Lat 42°07'16", long 75°56'57", at bridge on Harry L Road at Johnson City, Broome County, 1.2 miles upstream from unnamed tributary, and 2.1 miles upstream from mouth.
DRAINAGE AREA.-- 12.7 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1960, 1962, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion. Insufficient range in measured discharge to develop duration or frequency curves. Station discontinued Sept. 30, 1964. Station "at Stella" established Oct. 1, 1964, 0.5 mile upstream; not equivalent.

5134. Patterson Creek at Endwell, N. Y. Map No. 80

LOCATION.--Lat 42°06'58", long 76°01'13", at bridge on Pine Street at Endwell, Broome County, and 1.1 miles upstream from mouth.
DRAINAGE AREA.--7.03 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	--	--	--	--

Remarks.-- No known regulation or diversion. Insufficient data to develop duration or frequency curves.

5135. Susquehanna River at Vestal, N. Y. Map No. 81

LOCATION.--Lat 42°05'30", long 76°03'25", on left bank 400 ft downstream from highway bridge at Vestal, Broome County, and 800 ft upstream from Choconut Creek.
DRAINAGE AREA.-- 3,960 sq mi.
AVERAGE DISCHARGE.--23 years, 6,451 cfs. MINIMUM DAILY DISCHARGE.--250 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1938-59 RECORDS

Period	Discharge	Period	Discharge
3-day	253	90-day	408
7-day	261	120-day	449
14-day	276	150-day	566
30-day	297	183-day	772
60-day	351	274-day	1,280

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1938-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	520	360	300	270	250
7	570	390	330	290	270
30	690	460	380	340	320

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	41,000	22,500	15,500	12,000	9,700	6,800	5,000	3,600	2,700	1,900	1,300	1,050	810	600	450	390	340	270
1931-60	41,000	22,000	15,000	11,500	9,400	6,600	4,800	3,500	2,600	1,850	1,250	1,050	810	600	450	390	340	280

Remarks.-- Minor regulation by upstream lakes and reservoirs. Slight diversion, 10-20 cfs during summer months, into Oswego River and Hudson River basins.

5137. Choconut Creek at Vestal, N. Y. Map No. 82

LOCATION.--Lat 42°04'57", long 76°03'49", at bridge on State Highway 17, 0.4 mile west of Vestal, Broome County.

DRAINAGE AREA.-- 57.0 sq mi.
RECORDS AVAILABLE.-- 19 Discharge measurements (1956-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	.1	0	0
30	.6	0	0

Average discharge.-- 90 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
48	34	22	9.5	3.8	0.9	0.1	0	0

Remarks.-- No known regulation or diversion. Published as "Big Choconut Creek" prior to 1962.

5137.9 Nanticoke Creek at Union Center, N. Y. Map No. 83

LOCATION.--Lat 42°08'56", long 76°04'00", at bridge on County Highway 43 at Union Center, Broome County, 0.2 mile upstream from Bradley Creek. Datum of gage is 858.41 ft above mean sea level. Prior to Apr. 24, 1964 the
DRAINAGE AREA.-- 89.7 sq mi. datum was 856.91 ft above mean sea level.
RECORDS AVAILABLE.--10 Discharge measurements (1953, 1956, 1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.5	0.9	0.7
7	1.9	1.1	.8
30	3.1	1.4	1.0

Average discharge.--110 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
39	24	15	7.0	4.8	3.1	1.8	1.1	0.8

Remarks.-- No known regulation or diversion.

5138. Nanticoke Creek at Endicott, N. Y. — Map No. 84

LOCATION.--Lat 42°05'31", long 76°05'23", at bridge on State Highway 17C, 0.8 mile west of Endicott, Broome County.
DRAINAGE AREA.-- 112 sq mi.
RECORDS AVAILABLE.--16 Discharge measurements (1953, 1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	2.0	1.2	0.9
7	2.4	1.4	1.1
30	4.0	1.8	1.3

Remarks.-- No known regulation or diversion.

Average discharge.--130 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
49	31	19	9.5	6.3	4.0	2.3	1.4	1.0

5138.1 Tracy Creek near Vestal, N. Y. — Map No. 85

LOCATION.-- Lat 42°04'02", long 76°06'11", at bridge on Owego Road at Ross Corners, 0.4 mile upstream from mouth, and 2.5 miles west of Vestal, Tioga County.
DRAINAGE AREA.-- 8.75 sq mi.
RECORDS AVAILABLE.-- 8 Discharge measurements (observations of "no flow") (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	0	0	0	0

5138.2 Apalachin Creek at Apalachin, N. Y. — Map No. 86

LOCATION.-- Lat 42°03'44", long 76°08'57", at bridge on old State Highway 17 at Apalachin, Broome County, and 0.35 mile upstream from mouth.
DRAINAGE AREA.-- 43.7 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	--	--	--
7	--	--	--
30	--	--	--

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	2.5	0.5	Trace	0

5138.3 Little Nanticoke Creek near Owego, N. Y. — Map No. 87

LOCATION.-- Lat 42°05'32", long 76°13'02", at bridge on State Highway 17C, 1 mile upstream from Barnes Creek, 1.4 miles upstream from mouth, and 1.5 miles east of Owego, Tioga County.
DRAINAGE AREA.-- 20.7 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.1	0	0
7	.2	0	0
30	.9	.1	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	1.0	0.1	Trace	0

5139.1 Wilson Creek near Newark Valley, N. Y. — Map No. 88

LOCATION.--Lat 42°14'36", long 76°10'41", at bridge on State Highway 38, 0.1 mile upstream from East Branch Owego Creek, and 1.4 miles north of Newark Valley, Tioga County.
DRAINAGE AREA.-- 15.8 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	.1	0	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	0.2	0	0	0

5139.9 Doolittle Creek at Weltonville, N. Y. Map No. 89

LOCATION.--Lat 42°11'43", long 76°14'51", at bridge on State Highway 330, at Weltonville, Tioga County, 0.3 mile upstream from mouth, and 6 miles south of Jenkinsville.
DRAINAGE AREA.--17.0 sq mi.
RECORDS AVAILABLE.-- 6 Discharge measurements (observations of "no" flow) (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
--	--	--	--	--	0	0	0	0

5140. Owego Creek near Owego, N. Y. Map No. 90

LOCATION.--Lat 42°07'45", long 76°16'15", on right bank 300 ft upstream from highway bridge, half a mile upstream from from Catatonk Creek, and 1-1/2 miles north of Owego, Tioga County.
DRAINAGE AREA.--186 sq mi.
AVERAGE DISCHARGE.--30 years, 277 cfs. MINIMUM DAILY DISCHARGE.--8.9 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1931-59 RECORDS

Period	Discharge	Period	Discharge
3-day	9.1	90-day	11.7
7-day	9.3	120-day	12.0
14-day	9.5	150-day	14.5
30-day	10.2	183-day	22.7
60-day	11.1	274-day	49.7

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1931-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	13	11	10	9.6	9.2
7	15	12	11	11	10
30	17	14	13	12	11

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1931-60	2,500	1,050	650	470	360	240	165	115	80	52	31	24	18	14	11	10	9.7	9.0

Remarks.--No known regulation or diversion.

5145. Dean Creek at Spencer, N. Y. Map No. 91

LOCATION.--Lat 42°12'10", long 76°29'50", on right bank 25 ft upstream from small tributary, 85 ft downstream from highway bridge on Spencer Road at Spencer, Tioga County.
DRAINAGE AREA.-- 8.03 sq mi.
RECORDS AVAILABLE.-- July 1954 to September 1960.

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	Dry	Dry	Dry
7	Dry	Dry	Dry
30	Dry	Dry	Dry

Remarks.-- Since October 1955, high flows regulated by Pylkas Reservoir on Dean Creek (capacity, 180.7 acre-ft) and Pelto Reservoir on Burheight Creek (capacity, 53.4 acre-ft).

Average discharge.-- 7 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
1.2	0.6	0.2	0	0	0	0	0	0

5148. Catatonk Creek near Owego, N. Y. Map No. 92

LOCATION.--Lat 42°08'35", long 76°17'47", at bridge on county road, off State Highway 96, 3.3 miles northwest of Owego, Tioga County.
DRAINAGE AREA.-- 147 sq mi.
RECORDS AVAILABLE.-- 14 Discharge measurements (1956-62, 1964).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows			
Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	8.5	7.0	6.5
7	9.0	7.5	7.0
30	11	8.0	7.5

Remarks.-- No known regulation or diversion.

Average discharge.-- 230cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time								
50	60	70	80	85	90	95	98	99
105	72	42	18	14	11	9.0	7.5	7.0

5148.8 Pipe Creek at Tioga Center, N. Y. — Map No. 93

LOCATION.--Lat 42°03'34", long 76°20'45", at bridge on State Highway 17, at Tioga Center and 0.2 mile upstream from mouth, Tioga County.
DRAINAGE AREA.--46.5 sq mi.
RECORDS AVAILABLE.--7 Discharge measurements (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.05	0	0
7	.1	0	0
30	.3	.05	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	0.4	0.1	Trace	0

5149. Wappasening Creek at Nichols, N. Y. — Map No. 94

LOCATION.--Lat 42°01'17", long 76°21'45", at bridge on State Highway 283, at Nichols and 0.2 mile upstream from mouth, Tioga County.
DRAINAGE AREA.-- 72.1 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (observations of Trace or no flow) (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Remarks.--No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	0	0	0	0

5149.5 Ellis Creek near Barton, N. Y. — Map No. 95

LOCATION.--Lat 42°00'32", long 76°31'33", at bridge on State Highway 17, 0.6 mile upstream from mouth, and 3 miles southwest of Barton, Tioga County.
DRAINAGE AREA.--16.0 sq mi.
RECORDS AVAILABLE.-- 7 Discharge measurements (No flow or trace) (1962-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0	0	0
7	0	0	0
30	0	0	0

Remarks.-- No known regulation or diversion.

Average discharge.-- - cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
--	--	--	--	--	Trace	0	0	0

5150. Susquehanna River near Waverly, N. Y. — Map No. 96

LOCATION.--Lat 41°59'05", long 76°30'05", on left bank 1,000 ft upstream from Cayuta Creek, 2,000 ft upstream from bridge at Sayre, Pa., 1 mile downstream from New York-Pennsylvania State line, and 2 miles southeast of Waverly, Tioga County.
DRAINAGE AREA.--4,780 sq mi.
AVERAGE DISCHARGE.-- 23 years, 7,642 cfs.
MINIMUM DAILY DISCHARGE.--264 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	269	90-day	449
7-day	282	120-day	488
14-day	296	150-day	620
30-day	323	183-day	846
60-day	383	274-day	1,420

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	590	400	340	290	280
7	640	430	370	320	300
30	840	560	460	400	370

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	50,000	27,000	18,500	14,000	11,000	7,800	5,800	4,300	3,200	2,300	1,450	1,100	870	660	510	420	360	290
1931-60	50,000	26,500	18,000	14,000	11,000	7,700	5,500	4,100	3,000	2,150	1,450	1,100	870	640	490	420	370	300

Remarks.--Minor regulation by upstream lakes and reservoirs. Slight diversion, 10-20 cfs during summing months, into Oswego River and Hudson River basins.

5155. Cayuta Creek near Alpine, N. Y. — Map No. 97

LOCATION.--Lat 42°00'49", long 76°43'58", near right bank on upstream side of highway bridge at outlet of Cayuta Lake and 2 1/2 miles north of Alpine, Schuyler County.
DRAINAGE AREA.-- 17.6 sq mi.
RECORDS AVAILABLE.-- Daily discharges December 1929 to September 1931.

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	Trace	0	0
7	0.1	0	0
30	.3	Trace	0

Remarks.-- Natural regulation by Cayuta Lake. Because of short period of record, duration and frequency curves were developed by correlation methods using monthly mean discharges for period of record.

Average discharge.-- 25 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
11	7.5	4.9	2.3	1.2	0.4	0.1	0	0

5160. Cayuta Creek at Waverly, N. Y. Map No. 98

LOCATION.--Lat 42°00'32", long 76°31'33", at bridge on Ithaca Street, Waverly, Tioga County.

DRAINAGE AREA.-- 140 sq mi.
RECORDS AVAILABLE.-- 249 Discharge measurements (1938-65)[a/].

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	6.5	4.0	3.0
7	7.5	5.0	3.5
30	9.0	5.5	4.5

Average discharge.--190 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
75	51	32	16	12	8.5	6.2	4.7	4.0

Remarks.-- No known regulation or diversion.
a/ Intermittent record of stage and discharge measurements 1898-1902.

5205. Tioga River at Lindley, N. Y. Map No. 102

LOCATION.--Lat 42°01'45", long 77°07'55", on left bank just downstream from highway bridge at Lindley, Steuben County, 6 miles upstream from Canisteo River.
DRAINAGE AREA.--770 sq mi.
AVERAGE DISCHARGE.--30 years, 812 cfs. MINIMUM DAILY DISCHARGE.--7.2 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1930-59 RECORDS

Period	Discharge	Period	Discharge
3-day	7.8	90-day	26.7
7-day	9.5	120-day	33.6
14-day	11.2	150-day	37.4
30-day	12.7	183-day	36.5
60-day	19.0	274-day	122

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1930-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	33	18	13	9.8	8.6
7	39	21	15	11	9.6
30	52	27	19	14	12

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1931-60	7,500	3,300	2,050	1,450	1,050	670	430	290	195	130	84	65	50	37	26	20	16	11

Remarks.--No known regulation or diversion.

5215. Canisteo River at Arkport, N. Y. Map No. 104

LOCATION.--Lat 42°23'45", long 77°42'50", on left bank 1,000 ft downstream from Arkport Dam and 0.9 mile west of Arkport, Steuben County.
DRAINAGE AREA.--30.5 sq mi.
AVERAGE DISCHARGE.--23 years, 34.7 cfs (adj. for storage). MINIMUM DAILY DISCHARGE.--0.4 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.5	90-day	0.9
7-day	.6	120-day	1.0
14-day	.6	150-day	1.2
30-day	.7	183-day	1.5
60-day	.8	274-day	4.2

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	1.0	0.6	0.4	0.4	0.3
7	1.2	.7	.6	.5	.5
30	1.4	.8	.7	.7	.6

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	420	155	77	53	40	25	16	10	6.2	3.6	2.4	2.0	1.5	1.2	0.9	0.8	0.7	0.6
1931-60	440	145	80	54	40	24	15	9.2	5.8	3.6	2.4	2.0	1.5	1.2	.9	.8	.7	.6

Remarks.--Since November 1939, flows above 500 cfs controlled by detention in Arkport Reservoir.

5220. Canisteo River at Hornell, N. Y. Map No. 105

LOCATION.--Lat 42°20'20", long 77°39'40", on right bank 30 ft upstream from Seneca Street Bridge in Hornell, Steuben County, 4,000 ft upstream from Canacadea Creek, and 1 1/2 miles downstream from Big Creek.
DRAINAGE AREA.--95.0 sq mi.
RECORDS AVAILABLE.-- July 1938 to March 1943

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	6.5	5.5	4.5
7	7	6	5.5
30	8	6.5	6

Average discharge.-- 90 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
35	25	15	11	9.5	8	7	6.5	6

Remarks.-- City of Hornell diverts an average of about 3.5 cfs for municipal supply from Carrington Creek, a tributary above station; sewage enters river below gage. Since November 1939, flood flows partly regulated by Arkport Reservoir (capacity, 7,936 acre-ft); normal regulation generally insufficient to materially affect figures of monthly runoff.

5223. Canacadea Creek near Almond, N. Y. Map No. 106

LOCATION.-- Lat 42°17'19", long 77°44'52", at bridge on county road off State Highway 21, 2.1 miles southwest of Almond, Allegany County.
DRAINAGE AREA.-- 17.1 sq mi.
RECORDS AVAILABLE.-- 14 Discharge measurements (1956-60, 1962, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.0	0.7	0.6
7	1.2	.8	.7
30	1.5	1.0	.8

Average discharge.-- 17 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
6.1	4.3	3.1	2.3	1.9	1.6	1.3	1.0	0.9

Remarks.--No known regulation or diversion.

5225. Karr Valley Creek at Almond, N. Y. Map No. 107

LOCATION.--Lat 42°18'40", long 77°45'05", on right bank 500 ft downstream from McHenry Valley Creek, three-quarters of a mile upstream from mouth, and 1 mile southwest of Almond, Allegany County.
DRAINAGE AREA.--27.6 sq mi.
AVERAGE DISCHARGE.--23 years, 31.3 cfs.

MINIMUM DAILY DISCHARGE.--0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0	90-day	0.4
7-day	.1	120-day	.6
14-day	.1	150-day	.7
30-day	.2	183-day	.9
60-day	.3	274-day	3.8

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	0.5	0.2	0.1	Trace	Dry
7	.6	.3	.2	0.1	0.1
30	.9	.4	.2	.2	.1

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	380	135	70	46	33	20	13	8.0	4.6	2.7	1.6	1.3	0.95	0.62	0.39	0.30	0.24	0.17
1931-60	380	135	74	48	34	19	12	7.2	4.4	2.6	1.6	1.2	.92	.61	.40	.30	.24	.17

Remarks.--No known regulation or diversion.

5235. Canacadea Creek near Hornell, N. Y. Map No. 109

LOCATION.--Lat 42°20'05", long 77°41'00", on right bank 35 ft downstream from Morris Bridge near Hornell, Steuben County, 1.5 miles downstream from Almond Dam, and 2 miles upstream from mouth.
DRAINAGE AREA.--58.7 sq mi.
AVERAGE DISCHARGE.--18 years, 65.1 cfs (adj. for storage)

MINIMUM DAILY DISCHARGE.--4.1 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1941, 1945-59 RECORDS

Period	Discharge	Period	Discharge
3-day	4.2	90-day	6.0
7-day	4.3	120-day	6.5
14-day	4.7	150-day	6.6
30-day	5.1	183-day	7.0
60-day	5.6	274-day	11.9

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1941, 1945-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	6.6	4.9	4.2	3.7	3.5
7	7.4	5.4	4.6	4.1	3.8
30	8.6	6.3	5.5	4.9	4.6

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1941-42, 1945-60	720	255	140	98	73	46	32	23	18	14	11	9.4	8.1	6.7	5.7	5.2	4.9	4.6
1931-60	720	240	140	97	73	44	30	22	17	13	10	9.1	7.8	6.5	5.4	5.0	4.6	4.1

Remarks.--Since October 1948, flood flows regulated by detention in Almond Reservoir. Occasional regulation at low flows to clean debris from reservoir gates.

5245. Canisteo River below Canacadea Creek, at Hornell, N. Y. Map No. 111

LOCATION.--Lat 42°18'50", long 77°39'05", on right bank 235 ft upstream from Erie Railroad bridge in Hornell, Steuben County, 0.25 mile upstream from Crosby Creek, and 1.5 miles downstream from Canacadea Creek.
DRAINAGE AREA.--159 sq mi.
AVERAGE DISCHARGE.--18 years, 165 cfs.

MINIMUM DAILY DISCHARGE.--9.0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1943-59 RECORDS

Period	Discharge	Period	Discharge
3-day	9.5	90-day	18.2
7-day	10.4	120-day	18.3
14-day	10.5	150-day	20.2
30-day	11.7	183-day	22.3
60-day	15.0	274-day	33.8

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1943-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	17	12	10	8.9	8.1
7	19	14	12	10	9.3
30	21	16	14	12	12

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1943-60	1,650	620	360	260	200	130	92	65	46	34	27	24	21	18	14	13	12	10
1931-60	1,550	610	360	250	190	125	91	67	46	34	27	23	20	17	14	13	12	10

Remarks.--City of Hornell diverts an average of about 3.5 cfs for municipal supply from Carrington Creek, a tributary above station; sewage enters river below gage. Since November 1939, flood flows regulated by Arkport Reservoir, and since October 1948, by Almond Reservoir; normal regulation insufficient to materially affect figures of monthly runoff.

5250. Bennett Creek at Canisteo, N. Y. Map No. 112

LOCATION.--Lat 42°15'55", long 77°35'45", on left bank 400 ft upstream from Canisteo-Jasper highway bridge, a quarter of a mile east of Canisteo, Steuben County, and half a mile upstream from mouth.

DRAINAGE AREA.--95.8 sq mi.

RECORDS AVAILABLE.--June 1938 to September 1947

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.8	0	0
7	2.4	Trace	0
30	2.9	.2	.1

Remarks.--No known regulation or diversion.

Average discharge.--120 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
35	25	15	8	6	4	2	0.5	0.1

5255. Canisteo River at West Cameron, N. Y. Map No. 113

LOCATION.--Lat 42°13'20", long 77°25'05", on right bank 250 ft downstream from highway bridge, a quarter of a mile southeast of West Cameron, Steuben County, and 1 1/2 miles north of Cameron.

DRAINAGE AREA.-- 342 sq mi.

AVERAGE DISCHARGE.-- 24 years, 358 cfs.

MINIMUM DAILY DISCHARGE.--12 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	12.0	90-day	23.0
7-day	12.1	120-day	25.8
14-day	12.9	150-day	27.0
30-day	15.3	183-day	30.2
60-day	19.2	274-day	59.4

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	25	17	15	13	12
7	28	19	16	14	13
30	34	22	19	17	15

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1931, 1938-60	3,700	1,450	850	590	440	275	190	130	88	62	45	39	33	26	21	19	17	15
1931-60	3,600	1,450	840	560	410	245	165	115	85	62	45	39	33	26	21	19	17	15

Remarks.--Flood flows regulated by Arkport Reservoir since November 1939 and Almond reservoir since October 1948; normal regulation insufficient to materially affect figures of monthly runoff.

5260. Tuscarora Creek near South Addison, N. Y. Map No. 114

LOCATION.--Lat 42°04'00", long 77°17'00", on left bank 0.9 mile downstream from Elk Creek, 1-1/4 miles upstream from South Addison, Steuben County, and 3-1/4 miles southwest of Addison.

DRAINAGE AREA.-- 114 sq mi.

AVERAGE DISCHARGE.-- 23 years, 103 cfs.

MINIMUM DAILY DISCHARGE.--0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0	90-day	0.1
7-day	0	120-day	.3
14-day	0	150-day	.5
30-day	0	183-day	1.0
60-day	0	274-day	5.4

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	0.5	Trace	Dry	Dry	Dry
7	.7	0.1	Dry	Dry	Dry
30	1.4	.2	Trace	Dry	Dry

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	1,300	450	240	150	110	65	40	24	14	7.0	3.2	2.1	1.2	0.5	0.1	0	0	0
1931-60	1,250	450	240	160	110	60	35	20	12	6.6	3.3	2.1	1.2	.5	.1	0	0	0

Remarks.--No known regulation or diversion.

5265. Tioga River near Erwins, N. Y. Map No. 115

LOCATION.--Lat 42°07'15", long 77°07'45", on right bank 20 ft downstream from highway bridge, half a mile downstream from Erwins, Steuben County, and 3 miles upstream from confluence with Cohocton River.

DRAINAGE AREA.--1,370 sq mi.

AVERAGE DISCHARGE.--42 years, 1,380 cfs.

MINIMUM DAILY DISCHARGE.--20 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1919-59 RECORDS

Period	Discharge	Period	Discharge
3-day	20.3	90-day	56.2
7-day	22.4	120-day	63.2
14-day	26.2	150-day	69.6
30-day	29.5	183-day	69.5
60-day	45.7	274-day	197

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1919-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	62	40	31	26	23
7	69	43	34	29	26
30	96	60	46	37	33

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1919-60	13,500	5,500	3,300	2,350	1,800	1,100	760	510	350	235	155	125	99	72	54	46	40	30
1931-60	13,500	5,600	3,400	2,400	1,850	1,100	720	490	340	230	150	120	90	66	51	45	40	28

Remarks.--Flood flows slightly regulated by Arkport Reservoir since November 1939 and Almond Reservoir since October 1948.

5270. Cohocton River at Cohocton, N. Y. Map No. 116

LOCATION.--Lat 42°30'00", long 77°30'00", on left bank 450 ft downstream from highway bridge at Cohocton, Steuben County, and 800 ft downstream from small tributary.
DRAINAGE AREA.--53.3 sq mi.
AVERAGE DISCHARGE.--10 years, 57.4 cfs.

MINIMUM DAILY DISCHARGE.--2.4 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1951-59 RECORDS

Period	Discharge	Period	Discharge
3-day	2.6	90-day	6.2
7-day	2.8	120-day	6.8
14-day	3.1	150-day	7.6
30-day	3.6	183-day	9.1
60-day	5.6	274-day	13.0

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1951-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	4.9	3.2	2.6	--	--
7	5.7	3.7	3.0	--	--
30	6.7	4.4	3.7	--	--

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1951-60	370	200	140	110	88	62	45	32	22	15	11	9.3	7.7	6.1	4.8	4.2	3.6	2.8
1931-60	350	185	130	105	84	59	42	30	21	15	11	9.0	7.4	5.8	4.5	4.0	3.5	2.8

Remarks.-- No known regulation or diversion.

5275. Cohocton River at Avoca, N. Y. Map No. 117

LOCATION.--Lat 42°23'50", long 77°25'10", on left bank 15 ft downstream from highway bridge, three-quarters of a mile south of Avoca, Steuben County, and 4,200 ft upstream from Salmond and Goff Creeks.
DRAINAGE AREA.-- 157 sq mi.
RECORDS AVAILABLE.-- June 1938 to September 1945

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	20	15	13
7	22	17	14
30	27	20	17

Average discharge.-- 200 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
85	63	46	34	28	24	20	17	14

Remarks.--Diurnal fluctuation at low and medium flow caused by gravel plant above station.

5280. Fivemile Creek near Kanona, N. Y. Map No. 118

LOCATION.--Lat 42°23'15", long 77°21'30", on left bank just downstream from highway bridge, 1 1/4 miles upstream from mouth and Kanona, Steuben County.
DRAINAGE AREA.--68.0 sq mi.
AVERAGE DISCHARGE.--23 years, 74.0 cfs.

MINIMUM DAILY DISCHARGE.--0.1 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.1	90-day	0.8
7-day	.1	120-day	.9
14-day	.2	150-day	1.1
30-day	.3	183-day	1.4
60-day	.6	274-day	4.4

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	1.6	0.9	0.6	0.5	0.4
7	1.9	1.0	.7	.6	.5
30	2.3	1.3	1.0	.9	.8

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	770	305	185	130	97	60	38	24	14	7.1	4.1	3.2	2.4	1.7	1.3	1.0	0.8	0.2
1931-60	740	305	180	125	95	57	35	22	12	6.6	3.9	3.0	2.3	1.7	1.2	1.0	.7	.2

Remarks.--No known regulation or diversion.

5282. Campbell Creek near Kanona, N. Y. Map No. 119

LOCATION.-- Lat 42°20'48", long 77°23'54", at bridge, 2.4 miles southwest of Kanona, Steuben County.

DRAINAGE AREA.-- 32.8 sq mi.
RECORDS AVAILABLE.-- 17 Discharge measurements (1935, 1953, 1957-62, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.4	0.2	0.1
7	.5	.2	.1
30	.6	.3	.2

Average discharge.-- 30 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
8.8	5.5	3.0	1.4	0.9	0.6	0.4	0.3	0.2

Remarks.--No known regulation or diversion.

5290. Mud Creek near Savona, N. Y. — Map No. 121

LOCATION.--Lat 42°18'30", long 77°11'50", on left bank just upstream from small tributary entering from east, 2 miles upstream from Savona, Steuben County, and mouth.
DRAINAGE AREA.--76.1 sq mi.
AVERAGE DISCHARGE.--24 years, 45.1 cfs.

MINIMUM DAILY DISCHARGE.--0.1 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1937-59 RECORDS

Period	Discharge	Period	Discharge
3-day	0.1	90-day	1.2
7-day	.1	120-day	1.5
14-day	.2	150-day	1.7
30-day	.6	183-day	2.0
60-day	.9	274-day	3.3

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1937-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	1.5	0.8	0.5	0.4	0.3
7	1.8	.9	.6	.5	.4
30	2.3	1.2	.9	.7	.6

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1938-60	570	200	98	63	45	26	17	11	7.4	5.1	3.5	2.9	2.3	1.6	1.1	0.9	0.8	0.3
1931-60	550	200	98	61	43	24	15	10	6.9	4.8	3.3	2.6	2.1	1.5	1.1	.9	.7	.3

Remarks.-- Flow regulated by Lake Lamoka. During each year, a large part of flow from 45 sq mi of drainage area is diverted into Keuka Lake (Oswego River basin) for power development.

5295. Cohocton River near Campbell, N. Y. — Map No. 122

LOCATION.--Lat 42°15'10", long 77°13'00", on left bank just downstream from highway bridge, 1 1/2 miles upstream from Michigan Creek, and 2 miles upstream from Campbell, Steuben County.
DRAINAGE AREA.--472 sq mi.
AVERAGE DISCHARGE.--42 years, 452 cfs.

MINIMUM DAILY DISCHARGE.--8.0 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1919-59 RECORDS

Period	Discharge	Period	Discharge
3-day	8.3	90-day	21.8
7-day	10.6	120-day	26.9
14-day	11.9	150-day	30.8
30-day	15.3	183-day	35.1
60-day	19.6	274-day	59.7

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1919-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	34	25	19	13	10
7	39	30	22	16	13
30	46	33	27	21	18

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1919-60	3,900	1,700	1,050	760	590	390	270	190	130	96	70	59	49	40	30	24	20	14
1931-60	3,800	1,750	1,100	800	610	390	265	180	130	93	67	56	46	36	28	23	20	13

Remarks.--During each year a large part of flow from 45 sq mi of drainage area above Lake Lamoka Outlet on Mud Creek, a tributary above this station, is diverted into Keuka Lake (Oswego River basin), for power development.

5295.5 Michigan Creek at Campbell, N. Y. — Map No. 123

LOCATION.--Lat 42°13'50", long 77°12'23", at bridge on State Highway 333, 0.2 mile upstream from mouth, 0.6 mile west of Campbell, Steuben County.
DRAINAGE AREA.-- 22.7 sq mi.
RECORDS AVAILABLE.-- 13 Discharge measurements (1956-62, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.3	0.1	0
7	.4	.1	0
30	.6	.2	.1

Remarks.-- No known regulation or diversion.

Average discharge.-- 25 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
8.0	5.0	2.9	1.4	0.9	0.6	0.3	0.2	0.1

5298. Meads Creek at Coopers Plains, N. Y. — Map No. 124

LOCATION.--Lat 42°11'35", long 77°08'31", at bridge on Meads Creek Road, off U.S. Highway 15, 0.8 mile north of Coopers Plain, Steuben County.
DRAINAGE AREA.-- 68.5 sq mi.
RECORDS AVAILABLE.-- 16 Discharge measurements (1953, 1956-62, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.2	0.6	0.5
7	1.5	.7	.5
30	2.0	1.0	.7

Remarks.-- No known regulation or diversion.

Average discharge.-- 70 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
21	13	7.5	3.7	2.6	1.8	1.2	0.8	0.7

5302. Post Creek at Corning, N. Y. Map No. 125

LOCATION.--Lat 42°10'10", long 77°02'50", at foot bridge at N.Y.C.R.R. warehouse, 0.6 mile northeast of Corning, Steuben County.
DRAINAGE AREA.--31.9 sq mi.
RECORDS AVAILABLE.--15 Discharge measurements (1956-62, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.4	0.2	D.1
7	.5	.2	.2
30	.7	.3	.2

Remarks.--No known regulation or diversion.

Average discharge.--32 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
10	6.5	3.2	1.3	0.9	0.6	0.4	0.3	0.2

5303. Singsing Creek near Elmira, N. Y. Map No. 126

LOCATION.--Lat 42°08'29", long 76°54'26", at bridge on State Highway 17, 1.3 miles east of Big Flats, 4.1 miles northwest of Elmira, Chemung County.
DRAINAGE AREA.--21.3 sq mi.
RECORDS AVAILABLE.--15 Discharge measurements (1956-62, 1965).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	1.5	0.3	0.1
7	2.0	.7	.2
30	2.6	1.3	.7

Remarks.--No known regulation or diversion.

Average discharge.--23 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
11	8.8	6.5	4.6	3.7	2.8	1.7	0.8	0.5

5305. Newtown Creek at Elmira, N. Y. Map No. 127

LOCATION.--Lat 42°06'15", long 76°47'55", on left bank 200 ft downstream from Linden Place Bridge in Elmira, Chemung County, and 1 1/2 miles upstream from mouth.
DRAINAGE AREA.--79.8 sq mi.
AVERAGE DISCHARGE.--22 years, 91.4 cfs.

MINIMUM DAILY DISCHARGE.--6.3 cfs.

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON 1939-59 RECORDS

Period	Discharge	Period	Discharge
3-day	6.5	90-day	7.9
7-day	6.9	120-day	8.1
14-day	6.9	150-day	8.7
30-day	7.2	183-day	9.6
60-day	7.7	274-day	17.1

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON 1939-59 RECORDS

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	13	8.6	7.2	6.4	6.0
7	14	9.6	8.0	7.0	6.6
30	15	11	9.0	7.9	7.4

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1939-60	800	330	200	145	110	75	54	41	31	24	19	17	15	12	9.3	8.1	7.4	6.4
1931-60	800	300	185	135	105	73	52	38	29	22	18	15	13	11	9.1	8.1	7.4	6.0

Remarks.--No known regulation or diversion.

5308. Seeley Creek near Elmira, N. Y. Map No. 128

LOCATION.--Lat 42°03'03", long 76°46'32", at bridge on State Highway 427, 1.6 miles upstream from mouth, and 1.7 miles south of Elmira, Chemung County.
DRAINAGE AREA.--144 sq mi.
RECORDS AVAILABLE.--17 Discharge measurements (1950, 1956-62, 1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.6	0.2	0.1
7	.8	.3	.2
30	1.2	.5	.3

Remarks.--No known regulation or diversion.

Average discharge.--150 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
30	16	7.6	3.5	2.2	1.3	0.8	0.4	0.3

5310. Chemung River at Chemung, N. Y. Map No. 129

LOCATION.--Lat 42°00'10", long 76°38'00", on right bank 60 ft downstream from highway bridge, three-quarters of a mile southwest of Chemung, Chemung County, and 10 miles upstream from mouth.
DRAINAGE AREA.--2,530 sq mi.
AVERAGE DISCHARGE.--54 years (1905-13, 1914-60), 2,530 cfs. MINIMUM DAILY DISCHARGE.--5.2 cfs, 7.2 cfs a/

MINIMUM AVERAGE DISCHARGE, IN CFS, FOR INDICATED LENGTH OF PERIOD BASED ON a/

Period	Discharge	Period	Discharge
3-day	75.3	90-day	117
7-day	76.9	120-day	133
14-day	78.4	150-day	141
30-day	88.9	183-day	148
60-day	102	274-day	381

MAGNITUDE AND FREQUENCY OF ANNUAL LOW FLOW BASED ON a/

Period (consecutive days)	Discharge in cfs, for indicated recurrence intervals in years				
	2	5	10	20	30
1	160	105	84	74	71
7	180	115	92	81	77
30	210	135	110	96	90

DURATION OF DAILY DISCHARGE

Water years	Discharge, in cfs, which was equaled or exceeded for indicated percent of time																	
	1	5	10	15	20	30	40	50	60	70	80	85	90	95	98	99	99.5	99.9
1916-60	24,000	10,000	6,200	4,400	3,300	2,100	1,400	990	700	490	340	280	220	170	130	115	100	83
1931-60	23,500	9,900	6,100	4,300	3,300	2,100	1,450	980	680	470	315	255	205	155	125	110	97	80

Remarks.--High flows slightly regulated by upstream reservoirs. During each year a large part of flow from 45 sq mi is diverted from Mud Creek, an upstream tributary, into Keuka Lake, (Oswego River basin) for power development.
a/ Based on 40 climatic years 1915-59.

5312. Wynkoop Creek at Chemung, N. Y. Map No. 130

LOCATION.--Lat 42°00'24", long 76°36'13", at bridge on State Highway 17, 0.5 miles east of Chemung, Chemung County, and 0.8 mile upstream from mouth.
DRAINAGE AREA.-- 33.9 sq mi.
RECORDS AVAILABLE.-- 17 Discharge measurements (1956-62, 1964-65).

ADJUSTED TO STANDARD PERIOD, WATER YEARS 1931-60

Magnitude and frequency of annual low flows

Period (consecutive days)	Discharge, in cfs, for indicated recurrence intervals, in years		
	2	5	10
1	0.1	Trace	0
7	.1	Trace	0
30	.3	0.1	Trace

Remarks.-- No known regulation or diversion.

Average discharge.-- 35 cfs

Duration of daily discharge

Discharge, in cfs, which was equaled or exceeded for indicated percent of time

50	60	70	80	85	90	95	98	99
12	7.2	4.0	1.5	0.6	0.2	0.1	0	0

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An asterisk (*) indicates that the report is out of print, but such reports are available for consultation in certain libraries.

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